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Perfect score:
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                                                                                                                                                                                                                                   August 19, 2003, 09:31:59; Search time 41 Seconds (without alignments) 553.556 Million cell updates/sec
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1 MLSKGLKRKREEEEEKEPLA......YLMDVLVGTQALERPPGPGR 236
                                                                                                                BLOSUM62
                                             283308 seqs, 96168682 residues
                                                                                       Gapop 10.0 , Gapext 0.5
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nimum DB seq ximum DB seq length: 0 length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

PIR_76:* pir2:* pir3:*

Database

Pred. No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.

SUMMARIES

	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	ه ه	ъ	4	ω	N	. р.,	Result
	98	98.5	98.5	99	99.5	99.5	99.5	100	100	100.5	101	101	101.5	101.5	101.5	102.5	102.5	102.5	105	106.5	106.5	106.5	107	107.5	107.5	108.5	109	112.5	120	Score
	8.1	8.1	8.1	8.2	8.2	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.4	8.4	8.4	8.5									8.9					Query Match 1
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1	T21055	A46053	A38587	VGBEGX	T42730	A39299	I49575	T19964	S40521	EDBE23	A61262	S69999	A43359	T00329	EDBE22	A33280	A44825	T29018	A43776	S32538	T46614	H84310	T03748	QQBEB8	S71795	T00270	S61249	151213	WMBEH6	ij
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5.5	5.5	5.5	5.5	95.5	96	96	96	96	6.5	96.5	96.5	96.5	98	98	98
7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	8.0	8.O	8.0	8.0	8.1	8.1	8.1
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S28764	I40333	T33149	TVHUJD	W4WL5	EDBE75	D97630	T46304	SKXLAG	B56101	A56101	T00378	T35297	GNWVTW	T42717	A40670
	Ö	hypothetical prote	-	E4 protein - human		_	hypothetical prote	dermal gland prote	Ø	collagen alpha 1(X	KIAA0641 protein -	probable dihydroli	genome polyprotein	DNA-binding protei	nuclear envelope p

ALIGNMENTS

UL36 protein human herpesvirus 1 (strain 17)

C;Species: human herpesvirus 1
C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 16-Jun-2000
C;Accession: I30085 R; McGeoch,

A;Title: The complete DNA sequence of the long unique region in the genome of herpes A;Reference number: A30083; MUID:88274327; PMID:2839594 A;Accession: I30085 McGeoch, D.J.; Dalrymple, M.A.; Davison, A.J.; Dolan, A.; Frame, M.C.; McNab, D.; I Gen. Virol. 69, 1531-1574, 1988

A; Molecule type: DNA A; Residues: 1-3164 <MCG> A; Status: nucleic acid sequence not shown; translation not shown

C;Genetics:
A;Gene: UL36
C;Superfamily: varicella-zoster virus gene 22 protein A;Cross-references: GB:X14112; NID:g1944536; PIDN:CAA32311.1; PID:g59536; GB:D00317

DB 1; Length 3164;

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65;

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Similarity

ğ 밁 δõ 8 δÃ 밁 Q 밁 2617 PGP 2619 2566 -- EPVPPRMW---AWIHGLEELASDDSGGP----APILAPDPLSPTADQSVPTSQCAPRP_2616 2506 DASILSGELFPGHPVYQRAPDDQSPSVPNPTPGPVDLVGAEGSLGPGSLAPTLFTDATPG 2565 2446 MTPVAVLWENPDPPGPPDVRFVGSEATEELPFVAGGEDVLAASATDEDPFLARAILGRPF 2505 2396 IETWAVRLLHADLNPIENACLAAQLPRLSALIAERPLARGPP---CLVLV------DIS 2445 232 PGP 234 173 LFEDIDTSMYDNELWAPASEGLKPGPEDGPGKEEAPELDEAELDYLMDVLVGT-QALERP 231 121 DLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDL-----LGPAT--GCLLDDGLEG 81 MAPAAALPPVPSPPAAPSV-------ADNILASS----DAALSASMASILE 120 21 VDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQSEPDLRHLVLVVNTLRRIQAS 80 9.9%; Score 120; DB 1; L 26.7%; Pred. No. 2.8; ative 23; Mismatches 107; 48; 172

SEBMENCE Company on A

drebrin - chicken (fragment)
C.Species: Gallus gallus (chicken)
C.Species: Gallus gallus (chicken)
C.Species: Gallus gallus (chicken)
C.Accession: 151213
R;KOjima, N.; Shirao, T.; Obata, K.
Brain Res. Mol. Brain Res. 19 101 114 1993

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C;Accession: S61249
R;Vlcek, C.; Benes, V.; Lu, Z.; Kutish, G.F.; Paces, V.; Rock, submitted to the EMBL Data Library, January 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probable virion
C; Species: bovir
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C;Genetics:
A;Introns: 26/3; 51/3; 100/3; 126/3; 177/2; 198/3; 218/3; 257/1; 303/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-593 < KOJ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Molecular cloning of a developmentally regulated brain protein, A; Reference number: I51212; MUID:93368392; PMID:8361332
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olecule type: DNA
Residues: 1-688 <VLC>
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   Homo
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               protein KIAA0596 -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLG-----PATGCLLDDGLEGLFEDIDTSMYDNELWA----PASEGLKPGPEDGPGKE 205
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                                                                                                                                                                                                              EEGECFVLWAPVWRGGDVLFESPMQRLHGEVLACHALREH----ARLCQLLNTVPLKVLV 310
                                                                                                                    PLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFE--DIDTS
                                                                                                                                                                                -RRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSASMASLLEDLSHIEGLSQAPQ 133
sapiens
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               human (fragment)
                                                                                                                                                                                                                                                                         25;
                                                                                                                                                 KPPGAPSVEKLIGEGEDAAASSSAARLIKLIVNMKGM-----
                                                                                                                                                                                                                                                                                   Score 109; DB 2;
Pred. No. 2.8;
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A;Title: Prediction of the coding sequences of unidentified human genes. IX. The comp A;Reference number: 214086; MUID:98290545; PMID:9628581
A;Accession: T00270
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1217 <NAC
A;Cross-references: EMBL:AB011168; NID:93043715; PIDN:BAA25522.1; PID:93043716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 21-Jul-2000
C;Accession: T00270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transcription factor CBF-2 - chicken
C;Species: Gallus gallus (chicken)
C;Date: 12-Feb-1998 #sequence_revision 13-Mar-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: C; Genetics:
                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:U47276; NID:g1546783; PIDN:AAB08467.1; PID C;Superfamily: unassigned fork head proteins; fork head DNA-binding F;143-234/Domain: fork head DNA-binding domain homology <FHD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Yuasa, J.; Hirano, S.; Yamagata, M.; Noda, M.
Nature 382, 632-635, 1996
                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary; nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Title: Visual projection map specified by topographic A; Reference number: S71794; MUID:96338226; PMID:8757134
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                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S71795
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188 APAS 191
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                                                                                                                                                                   82 APAAALPPVPSPPAAPSVADNLLASSDAA-----LSASMASLLEDLSHIEGLSQAP 132
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGFPVGLGKAHSTTERWACLGEGTTPKPRTECQAHPGPSSPCAQQLPVSSL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -GLFEDIDTSMYDNELWAPASEGLKPGP-----EDGPGKEEAPELDEAELDYLMDVLVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -GLVAEPQAHAPIRVSPLSKLALPSRAHLVLDIPKPLPDRPTLAAFSPVTKGRAPGEAEK
                                           SPFSIESIIG
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26.2%;
                                           -GGPGPGLGA--
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Pred. No. 6;
                                                                                                                                                                                                                                Score 107.5;
Pred. No. 2.
                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                         -GPAPGAGGSCASQSGAATGLSRSLGSGL-----
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Post-processing: Minimum Match Maximum Match Listing first 100% 45 summaries 80

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PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Database

score q No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, serived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	ω	2	-	No.	Result
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hypothetical prote	æ		secreted glycoprot	Bassoon protein -	DNA-directed DNA p	CCAAT/enhancer bin		FKHR protein - hum	immediate-early pr	collagen alpha 1(x	sterigmatocystin s	microtubule-associ	hypothetical prote	immediate-early pr	sarcalumenin precu	phosphoprotein, sy	<u>a</u> 1	drebrin E2 - chick	cGMP-gated cation	chemotaxis protein	cobyric acid synth	apoptosis associat	UL80 protein - hum	transcription fact	hypothetical prote	probable virion pr	j	UL36 protein - hum	Description	

drebrin - chicken (fragment)
C;Species: Gallus gallus (chicken)
C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change
C;Accession: I51213
R;Kojima, N.; Shirao, T.; Obata, K.

21-Jul-2000

ima, N.; Shirao, T.; Obata, K.
Res. Mol. Brain Res. 19, 101-114, 1993

RESULT 2 I51213

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	S28764	N	1257	7.9	95.5	ű
tracheal colonizat	I40333	N	672	7.9	95.5	14
hypothetical prote	T33149	N	614	7.9	95.5	ω
transforming prote	TVHUJD	ب	303	7.9	95.5	ັນ
E4 protein - human	W4WL5	٦	245	7.9	95.5	Ξ
immediate-early pr	EDBE75	_	1298	7.9	96	ö
hypothetical prote	D97630	N	936	7.9	96	39
hypothetical prote	T46304	N	477	7.9	96	8
dermal gland prote	SKXLAG	۰	416	7.9	96	37
collagen alpha 1(X	B56101	N	1774	8.0	96.5	8
collagen alpha 1(X	A56101	N	1315	8.0	96.5	35
KIAA0641 protein -	T00378	N	1207	8.0	96.5	34
probable dihydroli	T35297		590	8.0	96.5	ä
genome polyprotein	GNWVTW	Н	3010	8.1	98	32
DNA-binding protei	T42717	N	2282	8.1	98	۳
nuclear envelope p	A40670	N	1199	8.1	98	ő

ALIGNMENTS

UL36 protein - human herpesvirus 1 (strain 17)
C;Species: human herpesvirus 1
C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 16-Jun-2000
C;Accession: I30085
R;McGeoch, D.J.; Dalrymple, M.A.; Davison, A.J.; Dolan, A.; Frame, M.C.; McNab, D.; E
J. Gen. Virol. 69, 1531-1574, 1988
A;Title: The complete DNA sequence of the long unique region in the genome of herpes
A;Reference number: A30083; MUID:88274327; PMID:2839594
A;Accession: I30085 밁 Ω 밁 QΨ 밁 δÃ В Ş Вb Ş A; Molecule type: DNA A; Residues: 1-3164 < MCG> C; Superfamily: varicella-zoster virus gene 22 protein A; Gene: UL36 A; Status: nucleic acid sequence not shown; translation A;Cross-references: Query Match Best Local : Genetics Matches 2617 2566 2396 IETWAYRLLHADLNPIENACLAAQLPRLSALIAERPLARGPP---CLVLV------DIS 2506 DASLLSGELFPGHFYYQRAPDDQSPSVPNPTPGPYDLYGAEGSLGPGSLAPTLFTDATPG 2446 MTPVAVLWENPDPPGPPDVRFVGSEATEELPFVAGGEDVLAASATDEDPFLARAILGRPF 2505 232 PGP 234 173 LFEDIDTSMYDNELWAPASEGLKPGPEDGPGKEEAPELDEAELDYLMDVLVGT-QALERP 121 DLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDL-----LGPAT--GCLLDDGLEG 81 MAPAAALPPVPSPPAAPSV-------ADNILASS----DAALSASMASILE 120 21 VDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQSEPDLRHLVLVVNTLRRIQAS ch 9.9%; l Similarity 26.7%; 65; Conservative 2 PGP 2619 --EPVPPRMW---AWIHGLEELASDDSGGP---GB:X14112; NID:g1944536; PIDN:CAA32311.1; PID:g59536; GB:D00317 Score 120; DB 1; Pred. No. 2.8; 3; Mismatches 107 -APLLAPDPLSPTADQSVPTSQCAPRP 2616 107; Length 3164; not shown Indels 48; Gaps 2565 2445 80 231 172 D.; P

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RESULT 3
S61249
                                     RESULT
T00270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Molecular cloning of a developmentally regulated A;Reference number: I51212; MUID:93368392; PMID:8361332 A;Accession: I51213
A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-593 <KOJ>
hypothetical protein KIAA0596
C; Species: Homo sapiens (man)
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                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:Z48053; N1D:CC;Superfamily: varicella-zoster virus
                                                                                                                                                                                                                                                                                                                                                                                             R;Vlcek, C.; Benes, V.; Lu, Z.; Kutish, G.F.; Paces, V.; Rock, D.; Letchworth, G.J.; Scl submitted to the EMBL Data Library, January 1995
A;Description: Nucleotide sequence analysis of a 30-kb region of the bovine herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                         probable virion protein - bovine herpesvirus 1
C;Species: bovine herpesvirus 1
C;Date: 18-Sep-1997 #sequence_revision 18-Sep-1997 #text_change 26-Aug-1999
C;Accession: S61249
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A: Accession: S61249
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A; Introns:
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                                                                                                                                                                                                                                                                                                                                                                                                                        ;;Accession: S
:;Accession: S
:Vlcek, C.;
                                                                                                                                                                                                                                                                                                              tatus: preliminary lolecule type: DNA lolecule type: DNA Residues: 1-688 <VLC> Cross-references: EMBL: Z48053; NID: g971311; PIDN: CAA88127.1;
                                                                                                                                                                                                                                                                              Query Match
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Best Local
                                                                                                                                                                                                                                                       Matches
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                                                                                                                                                              -RRIQASMAPAAALPPVPSPPAAPSVADNILASSDAALSASMASLLEDLSHIEGLSQAPQ 133
                                                                                                                  PLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFE--DIDTS 180
                                                                                                                                                                                                                          DPGHAAVAQAPPAVASSSLFDLSVLKLH-----HSLQQSEPDLRHLVLVVNTL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GEQRTRAPAEETPATPKDSPSPSTQVAEPAATEQHWPFPGPEDKAAEPPG-----
                                                                                                                                                                                                 EEGECFVLWAPVWRGGDVLFESPMQRLHGEVLACHALREH----ARLCQLLNTVPLKVLV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLKRKREEEEE------KEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLS
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                                                                                                                                            -KPPGAPSVEKLLGEGEDAAASSSAARLIKLIVNMKGM-----
                                                                                                                                                                                                                                                     25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                       human
                                                                                                                                                                                                                                                                  Score 109; DB 
Pred. No. 2.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 112.5; DB 2;
Pred. No. 1.3;
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                                                                                                                                                                                                                                                     Mismatches
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                       (fragment)
                                                                                                                                                                                                                                                                                                       gene 54
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                                                                                        --YLDDTAAGLFDVSDVDTS
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                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                              Length
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A; Residues: 1-440 < YUA>
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A;Cross-references: EMBL:U47276; NID:g1546783; PIDN:AAB08467.1; PID:g1546784 C;Superfamily: unassigned fork head proteins; fork head DNA-binding domain he;143-234/Domain: fork head DNA-binding domain homology <FHD>
                                                                                                                                                                                                                                                                                                                                                                                                                      C;Accession: S71795
R;Yuasa, J.; Hirano, S.; Yamagata, M.; Noda, M.
Nature 382, 632-635, 1996
A;Title: Visual projection map specified by topographic
A;Reference number: S71794; MUID:96338226; PMID:8757134
A;Accession: S71795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transcription factor CBF-2 - chicken
C;Species: Gallus gallus (chicken)
C;Date: 12-Feb-1998 #sequence_revision 13-Mar-1998 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 21-Jul-2000 (;Accession: T00270 R;Nagase, T; Ishkawa, K.; Miyajima, N.; Tanaka, A.; Kotani, H.; Nomura, N DNA Res. 5, 31-39, 1998 A;Title: Prediction of the coding sequences of unidentified human genes. IX A;Reference number: Z14086; MUID:98290545; PMID:9628581 A;Accession: T00270 A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Residues: 1-1217 <NAG>
A;Cross-references: EMBL:AB011168; NID:g3043715; PIDN:BAA25522.1; PID:g3043716
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                                         QPLADEGPPGRSIGGAAPSLGALDLLGPATG----CLLDDG-LEGLFEDIDTSMYDNELW
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A;Octoss relaterences: Embalanta (No. Marriage)
A;Note: possible protein-coding frames are given
A;Note: possible protein-coding frames are given
Stevens, J.T.; Mapelli, C.; Tsao, J.; Hail, M.; O'Boyle II, D.; Weinhelmer, S.P.
T. J. Biochem. 226, 361-367, 1994
A;Title: In vitro proteolytic activity and active-site identification of the human A;Reference number: $51034; MUID:95094793; PMID:8001553
A;Accession: $51034
A;Molecule type: protein
A;Note: assembly protein release site (Ala-256-Ser-257) and maturation site (Ala-C;Superfamily: cytomegalovirus capsid assembly protein
C;Superfamily: cytomegalovirus capsid assembly protein
C;Superfamily: cytomegalovirus capsid assembly protein
F;1-256/Product: viral proteinase; serine proteinase
F;1-256/Product: capsid assembly protein
F;337/Active site: Ser #status experimental
F;643-644/Cleavage site: Ala-Ser (viral proteinase) #status experimental
F;643-644/Cleavage site: Ala-Ser (viral proteinase) #status experimental
apoptosis associated tyrosine kinase - mouse (;Species: Mus musculus (house mouse) C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 08-Oct-19 C;Accession: T03748 R;Gaozza, E.; Baker, S.J.; Vora, R.K.; Reddy, E.P. Oncogene 15, 3127-3135, 1997 A;Title: AATYK: A novel tyrosine kinase induced during growth arrest and A;Reference number: Z15052; MUID:98105706; PMID:9444961
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A; Residues: 1-708 <CHE>
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R;Ng, W.V.; Kennedy, S.P.; Mahairas, G.G.; Berquist, B.; Pan, M.; Shukla, H.D.; Leithauser, B.; Keller, K.; Cruz, R.; Danson, M.J.; Hough, D.W.; Maddocks, D.G. Jung, K.H.; Alam, M.; Freitas, T. Proc. Natl. Acad. Sci. U.S.A. 97, 12176-12181, 2000
A;Authors: Hou, S.; Daniels, C.J.; Dennis, P.P.; Omer, A.D.; Ebhardt, H.; Lowe, A;Title: Genome sequence of Halobacterium species NRC-1.
A;Reference number: A84160; MUID:20504483; PMID:11016950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cobyric acid synthase [imported] - Halobacterium sp. NRC-1
C;Species: Halobacterium sp. NRC-1
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_c
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1317 <GAO>
A;Cross: references: EMBL:AF011908; NID:g2459992; PIDN:AAB71837.1;
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:AE004437; NID:g10581058;
                                                                                                                                     AALP------PVPSP------PAAPSVADNLLASSDAAL-----
YQMLGDRITDAATESTADDLGAVDGVGVLPVETAFQPDKRVEAVTRELADCG----ALGG
                                                                                        ARTPGVRVAYQPLDAPLAAADAVVLPGTKNTVDDLRAAREAGLGRALRAFDGPIVGLCGG\\
                                                                                                                                                                               DPG-----LPAEDSVSLPDPSE-RVVDGGQDGVPDAASVTVAVPHLPHISNFTDLAPL
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23.7%;
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-LGPAT---

-GCLLDDGLEGLF-EDIDTSMYDNELWAP

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CGMP-gated cation channel 2, rod - human (Species: Homo sapiens (man) (C;Species: Homo sapiens (man) (C;Date: 22-Nov-1993 *sequence_revision 17-Nov-1995 *text_change 16-Jul-1999 C;Accession: S32538 (Chen, T.Y.; Peng, Y.W.; Dhallan, R.S.; Ahamed, B.; Reed, R.R.; Yau, K.W. Nature 362, 764-767, 1993 (R;Chen, T.Y.) (Reference number: S32538; MUID:93226050; PMID:7882292 A;Accession: S32538
                                                                                                                                                                                       RESULT
S32538
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R; Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.;
adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K
.; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
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A; Residues: 1-753 <STO>
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A; Reference number: A82950;
A; Accession: F83463
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ccession: T46614
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type: mRNA
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K.R.; Kas,
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A; Residues: 1-315,359-607
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A;Accession: B43776
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A; Residues: 1-607 < KOJ>
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                                                                                                                                                                                                                                                                                        8.7%;
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A;Residues: 1-909 <CHE>
C;Superfamily: cAMP receptor protein cyclic nucleotide-binding domain homology
C;Keywords: cGMP binding
F;620-742/Domain: cAMP receptor protein cyclic nucleotide-binding domain homology
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Brain Res. Mol. Brain Res. 19, 101-114, 1993
A;Title: Molecular cloning of a developmentally
A;Reference number: I51212; MUID:93368392; PMID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: Nucleotide sequences of two embryonic A;Reference number: A43776 A;Accession: A43776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                drebrin E2 - chicken
C;Species: Gallus gallus (chicken)
C;Species: Gallus gallus (chicken)
C;Date: 01-Dec-1992 #sequence_revision 30-Jan-1993
C;Date: 01-Dec-1992 #sequence_revision 30-Jan-1993
C;Date: 01-Dec-1992 #sequence_revision 30-Jan-1993
C;Date: 01-Jan-1993
C;Date: 01-Jan-1993
R;Kojima, N.; Kato, Y.; Shirao, T.; Obata, K.
Brain Res. Mol. Brain Res. 4, 207-215, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated
A;Molecule type: mRNA
A;Residues: 1-132 <KO3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:S65230; NID:g410591; PIDN:AAB28010.1; PID:g410592
  LLGLDELPEPPATFCDAEQ----HEEVEEEEEEEEATAGEPHPTGLGYQEGYQEGP--
                                               LLG----PATGCLLDDGLEGLFEDIDTSMYDNELWA----PASEGLKPGPEDGPGK
                                                                                                                                             VADNL--LASSDAALSASMASLLEDLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALD
                                                                                                                                                                                                                                          VLKLHHSLQQSEPD-------LRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPS
                                                                                                                                                                                                                                                                                          GEQRTRAPAEETPATPKDSPSPSTQVAEPAATEQHWPFPGPEDKAAEPPG------
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                                                                                                                                                                                             ---DEPDPDPRPAWTAGADVLGDLV----TLEPSEPSPAPAAS---EPQPVETPG
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                                                                                                                                                                                                                                                                                                                                                                                  Score 105; DB Pred. No. 4.7; 18; Mismatches
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Pred. No. 5.9
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NyAlternate names: FI-20 protein
C; Species: Mus musculus (house mouse)
C; Date: 17-Feb-1994 **sequence_revision 17-Feb-1994 **text_change 02-1
C; Date: 17-Feb-1994 **sequence_revision 17-Feb-1994 **text_change 02-1
C; Accession: A44825; S27867; S27866
R; Zhou, S.; Sousa, R.; Tannery, N.H.; Lafer, E.M.
J. Neurosci. 12, 2144-2155, 1992
A; Title: Characterization of a novel synapse-specific protein. II. (
A; Reference number: A44825; MUID:92300439; PMID:1607933
A; Accession: A44825; MUID:92300439; PMID:1607933
A; Accession: A44825; MUID:92300439; PMID:1607933
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-901 <ZHO>
A; Cross references: GB:M83985; NID:g193208; PIDN:AAA37587.1; PID:g1:
A; Note: this sequence is inconsistent with the nucleotide translatic
A; Note: sequence extracted from NCBI backbone (NCBIN:106578, NCBIP::
R; Lafer, E.; Zhou, S.; Sousa, R.; Tannery, N.H.
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C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 17-Mar-2000
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A; Residues: 1-801 <KIR>
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   this sequence is inconsistent with the nucleotide translation sequence extracted from NCBI backbone (NCBIN:106578, NCBIP:10, E.; Zhou, S.; Sousa, R.; Tannery, N.H.
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23.4%; Pred. No. 9.
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A; Residues: 1-908 <LEB>
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A; Residues: 1-901 <LAF>
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53; Conserv
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sarcalumenin precursor, fast twitch skeletal muscle - rabbit c;Species: oryctolagus cuniculus (domestic rabbit) C;Date: 02-Feb-1990 #sequence_revision 02-Feb-1990 #text_charC;Accession: A33280  
R;Leberer, E; Charuk, J.H.M.; Green, N.M.; MacLennan, D.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Leberer, E.; Charuk, J.H.M.; Green, N.M.; MacLennan, D.H. Proc. Natl. Acad. Sci. U.S.A. 86, 6047-6051, 1989
A; Title: Molecular cloning and expression of cDNA encoding A; Reference number: A33280; MUID:89345602; PMID:2762314
                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M25750
C;Keywords: alternative splicing; skeletal muscle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Keywords: alternative splicing; phosphoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-714,720-901 <LA2>
A; Cross-references: EMBL: M83985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        submitted to the EMBL Data Library, February 1992
A;Description: Characterization of a synapse specific phosphoprotein which is a A;Reference number: S27866
A;Accession: S27867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          560 DIFGDLFDSAPEVAAAPKPDAAPSIDLFGTDAFSSPPRGASPVPESSLTADLLSVDAFA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      131 APQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFED-----IDTSM---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32 AVAQAPPAVASSSLFDLSVLKLHHSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPP--
GDEGSLQEERQELSSGEGPGEEAAGLGLPSEGAASGEMQGQAGGGKVPKEAEGVLGDSPV
                                                                                                                                 QASMAPAAALPP-VPSPPAAPSVADNLLASSDAALSA-----SMASLLEDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APSPAPTAVAATAATTTA--------AAAATTTATTSAAAATTAAAPPAL
                                          SHIEGLSQAPQPLAD-EGPPGRSIGGAAPSLGAL--DLLGPATGCLLDDGLEGLFEDIDT
                                                                                                                                                                                       AELQVP----ASGGTEDVGNLLENHFSAGDASLEEKERALYADAAPRDENLLLHYPDGREA
                                                                                                                                                                                                                                    AVAQAPPAVASSSLFDLSVLKLHH-----SLQQSE-----PDLRHLVLVVNTLRRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DLLAGFGGSFMAPSTTPVTPAQNNLLQPSFEAAFGTTPSTSSSSSFDPSVFDGLGDLLMP 725
                                                                                           ESAERTTAGAPPAAPGPGSEPEAS----LPNASATESAPPGDATGPREEQGPAAASALPPG
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21.2%; Pred
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26.2%;
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Pred. No. 11;
25; Mismatches
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                                                                                                                                                                                                                                                                                                            Score 102.5;
Pred. No. 11;
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N;Alternate names: early protein ER2.6; p135 protein

C;Species: bovine herpesvirus 1

C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 17-Mar-2000

C;Accession: A38209

R;Wirth, U.v.; Fraefel, C.; Vogt, B.; Vlcek, C.; Paces, V.; Schwyzer, M.

J. Virol. 66, 2763-2772, 1992

A;Title: Immediate-early RNA 2.9 and early RNA 2.6 of bovine herpesvirus 1 are 3' coterm A;Reference number: A38209; MUID:92219360; PMID:1313901

A;Accession: A38209
Search completed: August 19, 2003, 09:32:51 Job time : 44 secs
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Best Local S
Matches 63
                                                                                                                 648 ALAPOPG-GR 656
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                                                                                                                                                                                                                        598 GRERRPASAM-----ARGDLDPGPESSAQKRRRTEMEVAA--WVRESLLGTPRRSSA 647
                                                                                                                                                                                                                                                                                                                                    547 TAAATGTAAAIS-----TRAPTP----SPAGRAPAADPRRAGAPALAGAARAEAGRNGNP 597
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25.2%; Pred. No. 9.4;
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Result
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Perfect score:
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Match
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Gapop 10.0 , Gapext 0.5
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AAY12453
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Amino acid sequenc
Extended human sec
Novel human diagno
Human 5' EST secre
                                                                                                                                                                                                Description
                                                                                                                  Human cell cycle r
Human protein sequ
Human polypeptide,
                                                                           Human secreted pro
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Human secreted pro	ABR40426	23	443	8.6	104	G
	AA022900	23	113	8.6	104	-
	ABG15339	22	175	٠	105	ω
Dual-specific muri	AAW29150	18	663	8.8	106.5	N
	ABG15667	22	1444	•	107.5	_
_	AAM41039	22	1464	9.0	108.5	0
_	AAM78969	22	1279	9.0	108.5	Φ
human d	ABG12658	22	1219		108.5	œ
GTPase	AAM50136	22	1101		108.5	7
human	ABG04071	22	248		108.5	σ
Novel human diagno	ABG28366	22	802	9.3	112	G,
-	ABP65089	23	791		112	-
JMY protein	AAY09513	20	983		113	w
	ABB98406	23	2545		114	N
protein	AAU03503	22	2523	9.4	114	
PKIN-8 p	AAE21713	23	2429	9.4	114	0
protein	AAM79943	22	2189	9.4	114	9
protein SEQ	AAM78959	22	2161	9.4	114	8
_	AAE25098	23	2038	9.4	114	7
-	ABP69181	23	42	9.4	114	σ
n DNA-binding	ABG92575	23	255	9.5	115	Ui
human DNA	AAU18154	22	255	9.5	115	4
	ABB83690	23	789	9.6	116	ω
₽	ABB83698	23	644	9.6	116	N
•	ABG22868	22	322	10.7	129.5	_
	AA022897	23	237	12.6	152	0
colc	AAG74742	22	157	13.5	163.5	φ
CHD protein	ABB06375	23	241	13.6	165	æ
haemat	AA022898	23	241	13.6	165	7
n colon cance	AAG73682	22	254	13.9	168	σ
O	AAB58258	21	254		168	5
	AAM41511	22	254	•	170	4
ਜ਼,	AAM39725	22	241	14.0	170	ω
kia-induced p	ABP65076	23	314	17.2	208.5	N
Ę;	AAB35402	22	196	17.6	213	سر
Human polypeptide.	AAM93922	22	196	17.6	213	0

ALIGNMENTS

RESULT 1 AAY44362

AAY44362 standard; protein; 236 AA

14-MAR-2000 AAY44362;

(first entry)

CECRP-3; cell cycle regulation protein-3; cell proliferation; cell proliferative disease; cancer; atherosclerosis; cirrhosis; hepatitis; psoriasis; immune system disorder; altergy; asthma; acquired immune deficiency syndrome; Crohn's disease; Blast method; rheumatoid arthritis; gene therapy; chromosomal mapping. Key Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Homo sapiens Human cell cycle regulation protein-3. /note= 180 /note**-**123 /note= 117 /note= /note= Location/Qualifiers 'note= "Potential phosphorylation site" "Potential phosphorylation site" "Potential phosphorylation "Potential "Potential phosphorylation site" "Potential phosphorylation phosphorylation site" site"

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RESULT 2
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Best Local S
Matches 236
                 antiinflammatory; antirheumatic; antiarthritic; immunosuppressive; antiinflammatory; antirheumatic; central nervous system; virucide; anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia; antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema; antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activators of cell proliferation or inhibitors of cellular processes modulate proliferation. They are used to treat or prevent cell proliferative diseases like cancers, atherosclerosis, cirrhosis, hepatitis, psoriasis, immune system disorders (e.g. acquired immune deficiency syndrome, allergy, asthma, Crohn's disease, rheumatoid arthritis). Antibodies are raised to screen for specific binding agents. The corresponding nucleic acid is used in gene therap chromosomal mapping and isolation of related sequences.
  dermatological;
                                                                                                                                                                     Human
                                                                                                                                                                                                                                                                                                                  AAM25550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is cell cycle regulation protein-3 (CECRP-3). Prints analytical method was used to identify this protein. CECRPs are
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                                                                                                                     cancer; ulcer;
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                                                                                                                                                                                                                                                                                                                  standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFEDIDTS
                                                                                                                                                                                                                                                                                                                                                                                                                                        MYDNELWAPASEGLKPGPEDGPGKEEAPELDEAELDYLMDVLVGTQALERPPGPGR
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                                                                                                                                                                   sequence
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  antiallergic;
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                                                                                                                HIV infection; human immunodeficiency
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  antiasthmatic;
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  antidiabetic;
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25-APR-2000;
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                                                                Claim
                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thrombocytopaenia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; diabetes; multiple sclerosis; depression; Alzheimer's disease; Parkinson's disease; neurodegenerative disord
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                                                                                                     treatment
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                                                                                                                        Isolated
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                                                                                                                                                                                  2001-457603/49
                                                                20;
                                                                                                                                                                                                                                                               HYSEQ INC
                                                                                                                                                              ААН99491
to AAH99904 er
                                                                                                 human polynucleotides encoding t and diagnosis of e.g. cancer,
                                                            Page 214; 1217pp;
                                                                                                                                                                                                                        Liu
  AAH99904 encode the human proteins given in AAM25225 me proteins can have activities based on the tissues a
                                                                                                                                                                                                                                                                                                   99US-0471275.
2000US-0488725.
2000US-0552317.
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                                                              English.
                                                                                                     polypeptides, ulcers and HIV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disorder;
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V infection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                autoimmunity;
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cells they are expressed in, such as: antilnflammatory; antirheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide; antilhacterial; endocrine; cardiant; central nervous system; virucide; antibacterial; endocrine; cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary; antidiabetic; cytostatic; neuroprotective; antiallergic; antiasthmatic; antiparkinsonian; and immunostimulant. The proteins and polynucleotides encoding them can be used in gene therapy, antisense therapy and vaccine production. The proteins and polynucleotides are useful for screening for agonists or antagonists of a protein and for the treatment and diagnosis of disorders associated with the activity of a protein e.g. inflammation, rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal infections, autoimmunity, genetic diseases, haematopoletic disorders, autoimmunity, genetic diseases, haematopoletic disorders, autoimmunity, genetic diseases, haematopoletic disorders. rhinitis, asthma, diabetes, cance Alzheimer's disease, Parkinson's anaemia, platelet disorders, thrombocytopaenia, wounds, burns, u osteoporosis, severe combined immunodeficiency, eczema, allergic rhinitis, asthma, diabetes, cancer, multiple sclerosis, depressi neurological platelet disorders, disorders. disease, neurodegenerative depression,

Sequence 278 <u>Α</u>

Matches Query Match

Local

Similarity

100.0%;

Score 1210; Pred. No. 3 Mismatches

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Indels Length

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DB 22;

278;

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Best Local (
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                                                                                                                                                                                                           clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is a polypeptide encoded by a full length human cDNA of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                   The invention relates to primers
                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                   830 Primers useful for synthesizing full length cDNA clones and use in genetic manipulation -
                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM93724 standard; Protein; 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2001
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                                                                                                                                                                                                                                                                                                                                                                              8; SEQ
                                               61
                                                                      61
                                                                                                                                              11 Similarity
235; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                full length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nishikawa T, 1
su A, Sugiyama
                                                                                           MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQS
                                            DLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFEDIDTS
                      DISHIEGISQAPQPLADEGPPGRSIGGAAPSLGALDLIGPATGCLLDDGLEGIFEDIDTS
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                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                          ID NO 3677; 1380pp + sequence listing; English.
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2000JP-0183765
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                                                                                                                                                        99.7%;
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ma T, Nagai
                                                                                                                                            0:
                                                                                                                                           Score 1206; DB 22;
Pred. No. 5.3e-93;
0; Mismatches 1;
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K, Kojima
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S, Otsuki
                                                                                                                                                                   Length
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T, Koga
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EPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSASMASLLE

MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQS MLSKGLKRKREEEEEKEPLAVDSWWLDPGHTAVAQAPPAVASSSLFDLSVLKLHHSLQQS

Query Match Best Local S Matches 235

Similarity

99.7%;

Score 1206; D Pred. No. 5.3e 0; Mismatches

DB 22; 5.3e-93;

Length Indels

236;

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Gaps

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60 120

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Conservative

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RESULT 4
AAG89292
                                             contributions because the protests. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate GENSET gene expression. For example, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate GENSET expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides may be used as antisens in the production of antisponists and in assays to identify modulators (agonists and cantisense) of GENSET polypeptide expression and activity. The present sequence is a GENSET polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety o diseases, and for diagnosis of those diseases -
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 21; Page 889-890; 921pp; English.
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06-MAR-2000; 2000US-0187470
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human secreted protein, SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-SEP-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bougueleret
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RESULT 5
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                              This is the predicted amino acid sequence of a novel human secreted protein, g21_1, as deduced from an isolated adult blood cDNA
                                                                                                                                                 New polynucleotides derived from murine foetal cell cDNA libraries, potentially used as, e.g. vaccines \,
                                                                                                        Claim
                                                                                                                                                                                                                             WPI; 1999-562059/47.
N-PSDB; AAZ19894.
                                                                                                                                                                                                                                                                                                    Jacobs K,
Merberg D,
                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAR-1998;
17-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                                                           (GEMY ) GENETICS INST INC.
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                                                                                                   13(a); Page 94; 107pp; English.
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                                                                                                                                                                                                                                                                                                  McCoy JM,
Treacy M,
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99US-0078803
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67..79
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32..23
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                                                                                                                                                                                                                                                                                                  LaVallie ER,
Agostino MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "encoded by
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "a putative transmembrane
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                                                                                                                                                                                                                                                                                                  Collins-Racie LA,
Steininger RJ;
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                      Claim 1; Page 34-35; 40pp; Japanese
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AAY02619
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Best Local
New p16-binding protein useful in gene therapy cell cycle disorders
                                                                                                                              Hara
                                                                                                                                                                                                                                                                                                                                                                                                                              p16BP1; cell cycle regulator protein p16; binding protein; cell cycle regulation; cyclin D dependent kinase; CDK4; cell cycle progression; 19q13.1-13.2; cancer; gene therapy cell cycle disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kidney CDNA libraries. They are predicted to have biological activities which would make them suitable for treating, preventing or ameliorating medical conditions in humans and animals, although no supporting data are given. Suggested activities include nutritional, cytokine, tissue growth, cell proliferation and differentiation, immunostimulant (e.g. as vaccine), immunosuppressive, haematopoiesis regulating, activin or inhibin, receptor/ligand activity, antiinflammatory, cadherin or tumour invasion suppressor, and tumour inhibition activities.
                                                              WPI; 1999-313340/26
N-PSDB; AAX36177.
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                                                                                                                                                                                                                                                         04-NOV-1998;
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                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amino acid sequence of a p16 binding protein
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Pred. No. 9.4e-93;
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RESULT 7
AAY36004
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Best Local :
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                                                                                                                                                                                                                                  10-AUG-1998;
17-DEC-1997;
09-FEB-1998;
13-APR-1998;
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     New isolated
                                                                                                                                                                                                                                                                                                                                                                    17-DEC-1998;
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DB; AAX97688.
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human secreted
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97US-0069957.
98US-0074121.
98US-0081563.
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Pred. No. 2.5e
0; Mismatches
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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence is encoded by an extended human secreted protein coding sequence of the invention. The secreted proteins can be used in treating or controlling a variety of human conditions. The secreted proteins may act as cytokines or may affect cellular proliferation or differentiation or may act as immune system regulators, haematopoissis regulators, tissue growth regulators, regulators of reproductive hormones or cell movement or have chemotactic/chemokinetic, receptor/ligand, anti-inflammatory or tumour inhibition activity. The DNAs can be used in forensic procedures to identify individuals or in diagnostic procedures to identify individuals or in diagnostic procedures to identify individuals or in diagnostic procedures to identify the genes corresponding to the extended cDNAs. They are also useful for constructing a high resolution map of the human chromosomes. They can also be used for gene therapy to control or treat genetic diseases.
  New isolated diagnostics,
                                                                           WPI; 2001-639362/73.
N-PSDB; AAS78542.
                                                                                                                                                                                                                                                   31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                  (HYSE-)
                                                                                                                                                                                                                                                                                                                            30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                             11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                               WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel human diagnostic protein #14346.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABG14355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG14355 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9; Page 330-331; 516pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 XPDLRHLVLVXNTLRRIQASMAPAAALPPVPTPPAAPXVADNLLASSDAALSASMAXLLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chromosome
                                                                                                                                                   RT,
                                                                                                                                                                                                     HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DLSHIEGLSQAPQPLADEGPPGRSIGGXPPXLGALDLLGPATGCLLDNGLEGLFEDIDTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EPDLRHLVLVVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSASMASLLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      236 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                 Liu
polynucleotide and encoded polypeptides, forensics, gene mapping, identification
                                                                                                                                                                                                                                                   2000US-0540217
2000US-0649167
                                                                                                                                                                                                  INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mapping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein; 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.2%;
                                                                                                                                                 Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene mapping; gene therapy;
maging; diagnostic; genetic (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1164; Di
Pred. No. 1.7e
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 20;
.7e-89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    forensic;
mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    236;
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                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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RESULT 9
AAY12453
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to isolated polynucleotide (I) and CC polypeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CP polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC in testore normal activity of (II) or to treat disease states involving CC (II), (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful for treating CC diagnostics, forensics, gene mapping, identification of mutations in CC diagnostics, forensics, gene mapping, identification of mutations CC responsible for genetic disorders or other traits to assess biodiversity CC and to produce other types of data and products dependent on DNA and CC amino acid sequences. ABG00010-ABG30377 represent novel human CC diagnostic amino acid sequences of the invention.

CC Note: The sequence data for this pattent did not appear in the printed CC at fire. Wipo. int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                  Duclert A,
                                                                                  01-AUG-1997;
                                                                                                                                                                                                                                                     upstream regulatory sequence; cytokine activity; cell proliferation; differentiation; haematopolesis regulation; tissue growth regulation; reproductive hormone regulation; chemotactic; chemokineis.
                                                                                                                                                  11-FEB-1999
                                                                                                                                                                                                                                                                                                                                                             Human 5' EST
                                                (GEST ) GENSET
                                                                                                                  31-JUL-1998;
                                                                                                                                                                                  WO9906548-A2
                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                 thrombolytic;
                                                                                                                                                                                                                                                                                                       Human; secreted protein; EST; expressed sequence tag; diagnosis; forensic; gene therapy; chromosome mapping; signal peptide;
                                                                                                                                                                                                                                                                                                                                                                                             17-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY12453 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          responsible for genetic disorders biodiversity -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LKPGPEDGPG-KEEAPELDEAELDYLMDVLVGTQAL---ERPPGP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFEDIDTSMYDNE-----LWAPASEG 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LK----DGPGQRRKLRSLDEAELDYLMDVLVGTQATGSDRRGPRP 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 AA;
                  Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                           secreted protein SEQ ID NO:484.
                                                                                                                                                                                                                                              anti-inflammatory; tumour inhibition.
                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                  97US-0905135
                                                                                                                  98WO-IB01222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44714; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 335.5; DB 2
Pred. No. 1.6e-20;
5; Mismatches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Å
                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or other traits and to assess
                Lacroix
                  ₿,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                 haemostatic;
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RESULT 10
AAM93922
AC XXXX PPI XXXX
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                                                                                                                                                                                   08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                can also be used to develop products for diagnosis and therapy. The proteins obtained may have cytokine activity, cell proliferation/differentiation activity, haematopoiesis regulating activity, tissue growth regulating activity, reproductive hormone regulating activity, chemotactic/ chemotheric activity, haemostatic and thrombolytic activity, receptor/ ligand activity, anti-inflammatory activity activity, receptor/ ligand activity, anti-inflammatory activity, tumour inhibition activity or other activities. The products can be used in forensic, gene therapy and chromosome mapping procedures. The sequences can also be used for obtaining corresponding promoter sequences. The nucleic acids encoding the signal peptide can be used for directing extracellular secretion of a polypeptide or the insertion of a
         830 Primers useful for synthesizing full length cDNA clones and their use in genetic manipulation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human secreted proteins, and encode the proteins given in waitages to hamily secreted proteins. The proteins given represent the signal peptide and an N-terminal fragment of a secreted protein. The nucleic acid sequences can be used for producing secreted human gene products. They
                                                         N-PSDB;
                                                                          WPI; 2001-524255/58
                                                                                                                        Ota T,
                                                                                                                                                                                                                                                 07-JUL-2000;
                                                                                                                                                                                                                                                                                 05-SEP-2001.
                                                                                                                                                                                                                                                                                                             EP1130094-A2
                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                        Human; full length cDNA; cDNA synthesis; oligo-capping
                                                                                                                                                                                                                                                                                                                                                                                                                                       06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAM93922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAM93922 standard; Protein; 196
                                                                                                         Wakamatsu
                                                                                                                                                       (HELI-)
                                                                                                                                                                                                                                                                                                                                                                                                       Human polypeptide, SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX41094 to AAX41347 represent 5' expressed sequence tags (ESTs) for human secreted proteins, and encode the proteins given in AAY12261 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 27; Page 782-783; 824pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kidney, lung, umbilical cord, placenta and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New nucleic acids encoding human secreted proteins - obtained from cDNA libraries prepared from e.g. liver, ovary, brain, prostate,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polypeptide into a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
56; Conserv
                                                                                                                        Nishikawa T,
                                                                                                                                                       HELIX RES INST
                                                          AAK94884.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                    2000JP-0118774.
2000JP-0183765
                                                                                                                                                                                                                                                  2000EP-0114089
                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                      Sugiyama
                                                                                                                                                                                                                  99JP-0194486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     membrane, or importing a polypeptide into a cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23.9%;
                                                                                                                     Isogai T,
                                                                                                         Н
                                                                                                        Nagai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score :
                                                                                                                                                                                                                                                                                                                                                                                                          4085
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                                                                                                      Hayashi K,
K, Kojima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; DB 20;
. 5.4e-17;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      colon tissue
                                                                                                        ά
                                                                                                                       Ishii S,
                                                                                                         Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 brain, prostate,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
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                                                                                                        Kawai Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
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                                                                                                      Η;
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RESULT 11
AAB35402
ID AAB35
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Matches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       molecules have been determined. Primers for synthesising the full length CDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is a polypeptide encoded by a full length human cDNA of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
 Disclosure; Fig 1;
                                                                                 N-PSDB;
                                                                                                                                                                                                    17-AUG-2000;
                                                                                                                                                                                                                               01-MAR-2001
                                                                                                                                                                                                                                                        WO200114546-A2
                                                                                                                                                                                                                                                                                  Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB35402 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The
                           therapy
                                                       Novel
                                                                                                                       Alaoui-Jamali
                                                                                                                                                (TRAN-) CENT TRANSLATIONAL RES
                                                                                                                                                                          19-AUG-1999;
                                                                                                                                                                                                                                                                                                            RPA32;
                                                                                                                                                                                                                                                                                                                          RBT1;
                                                                                                                                                                                                                                                                                                                                                  Replication protein
                                                                                                                                                                                                                                                                                                                                                                               23-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clones. 830 cDNA molecules encoding a hur
isolated and nucleotide sequences of 5'-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clones.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention relates to primers for synthesising full length cDNA
                                                                                            2001-218447/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                     replication protein A binding transcriptional activator 1 for treating neoplastic disorders such as cancer and in c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8;
                                                                                                                                                                                                                                                                                                                          replication
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                                                                                                                                                                                                                                                                                                           gene therapy;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ
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                                                                                                                       MA,
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                                                                                                                                                                                                                                                                                                        protein A binding transcriptions
py; apoptosis; cancer; leukaemia.
16pp;
                                                                                                                       Ch<sub>O</sub>
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                                                                                                                                                                                                                                                                                                                                                                                                                                 196
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Pred. No. 5.4e-10;
6; Mismatches 69;
                                                                                                                                                                                                                                                                                                                                                  transcriptional activator 1 RBT1.
                                                                                                                                                 Z
                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                CANCER
                                                                                                                                                                                                                                                                                                                        transcriptional activator 1;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                            Cytostatic; vasotropic; tranquillser; antiatherosclerotic; gene therap; antiinflammatory; vulnerary; gynecological; ophthalmological; vaccine; hypoxia; tumourigenesis; angiogenesis; apoptosis; cancer; ischaemic condition; reperfusion injury; retinopathy; neonatal stress; preeclapmsia; atherosclerosis; inflammatory condition; wound healing;
                                                                                                                                                                                            08-DEC-2000; 2000GB-0030076.
08-FEB-2001; 2001GB-0003156.
25-OCT-2001; 2001GB-0025666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides the protein and coding sequences of replication protein A binding transcriptional activator 1 (RBT1). 1 protein is capable of inducing apoptosis. The sequences are useful gene therapy and other methods of treatment of cancer, including
                                                  Identifying a gene involved in disease for treating conditions, comprises comparing the transcriptome/pr types under different conditions and identifying a c
                                                                                                     WPI; 2002-627238/67.
                                                                                                                             Rayner
                                                                                                                                           White J,
                                                                                                                                                                                                                                              10-DEC-2001; 2001WO-GB05458
                                                                                                                                                                                                                                                                         13-JUN-2002
                                                                                                                                                                                                                                                                                                 WO200246465-A2
                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                    inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypoxia-induced
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABP65076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABP65076 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122 L-SHIEGLSQAPQP-----LADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 GLKRKREEEEEKEPLAVDSW-WLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQSEPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRRHVLIHNTLQQLQAALRLAPAPALPPEPL-----FLGEEDFSLSATIGSILRE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DIDTSAVEKE---PARAPPEP-PHNLFCAPGSWE-----WNELDHIMEIILGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIDTSMYDNELWAPASEGLKPGPED----GPGKEEAPELDEAELDYLMDVLVGT 225
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                                                                                                                                         Mundy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is the RBT1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                  erythropoiesis;
                                                                                                                                                                    BIOMEDICA
                                                                                                                                         CR,
                                                                                                                                                                                                                                                                                                                                                                                                                                           protein #16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
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                                                                                                                                           Ward NR,
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Pred. No. 5.4e-10;
                                                                                                                                                                                                                                                                                                                                                    hair
                                                                                                                                         Krige
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                                                                                                                                                                                                                                                                                                                                                  loss;
                                                 transcriptome/proteome
didentifying a differen
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                                                                                                                                        Kingsman
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                                                  proteome of two
differentially
                                                             hypoxia-regulated roteome of two cell
                                                                                                                                         Harris
                                                                                                                                                                                                                                                                                                                                                                                                                gene therapy;
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Claim 13;

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RESULT 13
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ID AAM39725
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Matches 88
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                                                                                                              26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                     Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance peripheral nervous system; neuropathy; central nervous system; CNS; Alzhelmer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
                                            26-DEC-2000; 2000WO-US34263
                                                                                                                                                                           WO200153312-A1
                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                             chemokinetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human polypeptide SEQ ID NO 2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAM39725 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  condition, such as cancer, ischaemic conditions, reperfusion injury, retinopathy, neonatal stress, preeclapmsia, atherosclerosis, inflammatory conditions, wound healing, inflammation, erythropoiesis or hair loss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPSQPFKMDLTELDHIMEVLVGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----ELDEAELDYLMDVLVGT 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --ATGCLLDDGLEG-LFEDIDTSMYDNELWAPAS---EGLKPGPEDGPGKEEAP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPSSHPCDLGSTTPLEACLTPASLLEDDDDTFCTSQAMQPTAPTKLSPPALLPEKDSFSS
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27.2%;
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Pred. No. 2.3e-09;
7; Mismatches 91
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RESULT 14 AAM41511

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AAM41511 standard; Protein;

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25-APR-2000;
09-JUL-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
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Wang
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                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               invention relates to human nucleic acids (AAI57798-AAI61369) and encoded polypeptides (AAM38642-AAM42213) with nootropic,
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Wang Z,
                                                                                                                                                                                                                                                           MLSKGLKRK--REEEEEKEPLA----VDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLH 54
                             PGKEEAPELDEAELDYLMDVLVGT
                                                                                     ---ALDLLGPATGCLLDDGLEGLFEDIDTSMYD-NELWAPASEGLKPGPEDG-----
                                                                                                                    WGQEGAHPASGLGD-GHTQGPVSDLCPVTSAQAPRHLQSSAWEMDGPRENRGSFHKSLDQ
                                                                                                                                                 M-----ASLLEDLSHIEG-----LSQAPQPLADEG----PPGRSIGGAAPSLG- 153
                                                                                                                                                                               LCHMLVEPNLCRSVLIANTVRQIQEEMTQDGTWRTV-APQAAERAPLDRLVSTEILCRAA
                                                                                                                                                                                                         HSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSAS 114
 PGPSSSCKSDLGELDHVVEILVET 241
                                                          IFETLETKNPS--C----MEELFSDVDSPYYDLDTVLTGMMGGARPGPCEGLEGLAPAT
                                                                                                                                                                                                                                          MFARGLKRKCVGHEEDVEGALAGLKTVSSY----
                                                                                                                                                                                                                                                                                                                                                             241 AA;
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2000US-0552317.

2000US-0598042.

2000US-0620312.

2000US-0623450.

2000US-0652191.

2000US-0693036.

2000US-0727344.
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Wehrman T,
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28.0%;
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                                                                                                                                                                                                                                                                                                  39; Mismatches
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Pred. No. 2.7e-06;
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Drmanac R
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e AJ,
RT;
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Zhang J;
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25-APR-2000;
09-JUL-2000;
19-JUL-2000;
                                                                                                                                                                                                               The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, activity, chemotactic/chemokinetic activity, heemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and
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19-OCT-2000;
29-NOV-2000;
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DB; AAI60667.
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Wang 2
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                                                MFARGLKRKCVGHEEDVEGALAGLKTVSSY---
                                                                         MLSKGLKRK---REEEEEKEPLA----VDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLH
                         HSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSAS
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2000US-0620312.
2000US-0663450.
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Wehrman T, Xi
Coodrich R,
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                                                                                                    Score 170; DB
Pred. No. 2.9e
39; Mismatches
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Xu C, Xue
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AJ,
RT;
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                                                                                                    DB 22;
2.9e-06;
1es 89;
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Yang
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                   Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer cassociated proteins represented in AAB58106 - AAB58548. Lung cancer associated proteins and polynucleotide sequences, their agonists, and cantended antagonists may have neuroprotective; cytostatic; cardioactive; cinmunomodulatory; muscular active general; vulnerary; gastrointestinal contributes in also includes antibodies specific for the activity. The invention also includes antibodies specific for the protein or polynucleotide sequences. The lung cancer associated conjuncteotide sequences. The lung cancer associated conjuncted designation, as chromosome markers, and for numerous other diagnostic or research purposes. The proteins may be used to treat conjunction as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders such as neural, immune, muscular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and conjunction and characterisation of the polynucleotide and protein
                                                                                                                                                                                                                                                                                                   antigens, useful for treatment, prevention, such as lung cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; r
                                                                                                                                                                                                                                                                                 Claim
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ROSEN
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6 oryctolagus
6 homo sapien
6 bovine herp
6 rattus norv
7 emericella
7 homo sapien
8 mus musculu
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6 horo sapien
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MEDLINE-2002075; PubMed=10551867;
Zitzer H., Hoenck H.-H., Baechner D., Richter D., Kreienkamp "Somatostatin receptor interacting protein defines a novel famultidomain proteins present in human and rodent brain.";
J. Biol. Chem. 274:32997-33001(1999).
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SH3 and multiple ankyrin repeat domains protein 1 (Shank1)
(Somatostatin receptor interacting protein) (SSTR interacting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The Shank family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=20267867;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                      TISSUE SPECIFICITY: Expressed in brain part amygdala, hippocampus, substantia nigra and seems to be expressed ubiquitously.
SIMILARITY: BELONGS TO THE SHANK FAMILY.
SIMILARITY: Contains 6 ANK repeats.
SIMILARITY: Contains 1 PDZ/DHR domain.
SIMILARITY: Contains 1 Sterile alpha motif SIMILARITY: Contains 1 Sterile alpha motif
                                                                                                                                                                                                         s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and synaptic junction.
SUBUNIT: May homomultimerize via its SAM domain (By similarity).
Interacts with SSTR2 C-terminus via the PDZ domain. Interacts with
SPTANI, Homer-1 and DLGAP1/GKAP isoforms 1 and 2 (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: Seems to be an adapter protein in the postsynaptic density (PSD) of excitatory synapses that interconnects receptors of the postsynaptic membrane including MMDA-type and metabotropic glutamate receptors via complexes with GKAP/PSD-95 and Homer, respectively, and the actin-based cytoskeleton. May play a role in the structural and functional organization of the dendritic spine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Cytoplasmic; postsynaptic neuronal cells (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neuronal cells (By statement)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Is part of a complex with similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=1; Synonyms=A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Event=Alternative splicing; Named isoforms=3;
   AF163302;
AF226728;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ime=2; Synonyms=B;
IsoId=Q9Y566-2; S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=Q9Y566-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IsoId=Q9Y566-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ank family of scaffold page 5c1. 113:1851-1856(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9NYW9;
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etazoa; Chordata;
theria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
AAD45121.1;
AAF35887.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=10806096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence=VSP_006071;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence=VSP_006069,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DLG4/PSD-95 and DLGAP1/GKAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2161
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VSP_006070
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and thalamus.
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                                                                                                                                                                                                                                                                                                                                                                         (SAM) domain.
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InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARSPLIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PF00018;
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TPGPPYP 1748
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PS50106; PDZ; 1.
PS50105; SAM_DOMAIN; 1.
PS50002; SH3; 1.
                                                                                                                                                                                                        LLEDLSHIEGLSQAPQPLADEGPPGRSI-GGAAPSLGALDLLGPATGCLLDDGLEGL---
                                                                                                                                                                                                                                                                          SEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSP--PAAPSVADNLLASSDAALSASMAS
                                       LERPPGP 234
                                                                               SSSDHPLETISSASTLSSLSAEGGGSAGGGGGAGAGVASGPELLDTYVAYLDGQAFGGSS
                                                                                                                                                              L-----TQGASAAPGDPHPPGPPAPAAPAPAPAPQPGP----DPPPG--TDSGIEEVDSR
                                                                                                                                                                                                                                                                                                                                 RASEENGLPLLV----LPPPAPSVDVEDGEFLFVEPLPPPLEFSNSFEKPESPLTPGPPH
                                                                                                                                                                                                                                                                                                                                                                           REEEEEKEPLAVDSWWLDPGHAA------VAQAPPAVASSSLFDLSVLKLHHSLQQ
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* = 474; SHANK1.
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                                                                                                                    FEDIDTSMYDNELWAPASEGLKPGPEDGPGKEEAPELDEAELDYLMDVLVGTQA
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26.7%;
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PDZ.
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                                                                                                                                                                                                                                                  ----TPAPATPLPPVPPPAVAAAPPTLDS-TASSLTSYDSEVAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 118.5;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /FTId=VSP_06069.
/FTId=VSP_06069.
RSQESKQESRSDKAKKLFRHYTVGSYDSFDAPSLMDGIGPG
-> MQLMALEQREGSGLPGGGQPLCLMMSSPLPPPPPHFSC
LPA (in isoform 2).
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POLY-GLY.
POLY-GLY.
POLY-GLY.
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/FTId=VSP_006070.
Missing (in isoform 3).
/FTId=VSP_006071.
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RESULT 4
DREB_CHICK
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01-NOV-1990 (Rel. 16, Created)
01-NOV-1997 (Rel. 35, Last sequence up
01-NOV-1997 (Rel. 41, Last annotation
28-FEB-2003 (Rel. 41, Last annotation
-1- TISSUE SPECIFICITY: BRAIN NEURONS.
-1- MISCELLANEOUS: DREBRINS ARE CLASSIFIED INTO TWO FORMS OF THE EMBRYONIC TYPE (E1 AND E2) AND ONE FORM OF THE ADULT TYPE (A).
TIME COURSE OF THEIR APPEARANCE ARE DIFFERENT FROM EACH OTHER.
THEIR STRUCTURES ARE CLOSELY RELATED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brain Res. Mol. Brain Res. 19:101-114(1993).
-I- FUNCTION: DREBRINS MIGHT PLAY SOME ROLE IN CELL MIGRATION,
-EXTENSION OF MEURONAL PROCESSES AND PLASTICITY OF DENDRITES,
RESPECTIVELY. BINDS F-ACTIN.
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MEDLINE=93368392; PubMed=8361332;
Kojima N., Shirao T., Obata K.;
"Molecular cloning of a development of the control of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rojima N., Kato Y., Shirao T., Obata K.;
"Nucleotide sequences of two embryonic drebrins, developmentally regulated brain proteins, and developmental change in their mRNAs prain Res. 464:207-215(1988).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus.
NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Event-Alternative
                                                                                                                                                                                                                                                                                                                                                                          IsoId=P18302-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IsoId=P18302-1;
                                                                                                                                                                                                                                                                   IsoId=P18302-3; Sequence=VSP_004197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene.";
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; Galliformes; Phasianidae; Phasianinae;
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EMBL; InterPro; IPROC Pfam; PF00241; \$65289; \$65290; \$65291; \$65292; \$65294; M36961; S65296; S65279; S65280; S65281; S65281; S65230; SM00102; IPR002108; ; AAA48750.1; AAB28012.1; AAB28012.1; AAB28012.1; AAB28012.1; AAB28012.1; AAB28012.1; AAB28012.1 AAB28012.1 AAB28011.2 AAB28012. AAB28012. AAB28012. AAB28010 cofilin_ADF;
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AX MEDINE-20057165; PubMed-10591208;
AD Dunham I., Hunt A.R., Collins J.E., Bruskiewich R., Beare D.M.,
AN Clamp M., Smink L.J., Ainscough R., Almeida J.P., Babbage A.K.,
AN Bagguley C., Bailey J., Barlow K.F., Bates K.N., Beasley O.P.,
AN Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
AN Burrill W.D., Burton J., Carder C., Carter N.P., Chen Y., Clark G.,
AN Burrill W.D., Burton J., Carder C., Carter N.P., Chen Y., Clark G.,
AN Conroy D., Cobley Y.E., Cole C.G., Collier R.E., Connor R.,
AN Conroy D., Corby N.R., Coville G.J., Cox A.V., Davis J., Dawson E.,
AN CONTON D., Dockree C., Dodsworth S.J., Durbin R.M., Ellington A.G.
AN Evans K.L., Fey J.M., Fleming K., French L., Garner A.A.,
AN Gilbert J.G.R., Goward M.E., Graffam D.V., Griffiths M.N.D., Hall C.
AN Hunt S.E., Hall-Tamlyn G., Heathcott R.W., Ho S., Holmes S.,
AN Hunt S.E., Jones M.C., Kershaw J., Kingerley A.M., King A.,
AN Laird G.K., Langford C.F., Leversha M.A., Lloyd D.M.,
AN Martyn I.D., Mashreghi-Mohammadi M., Matthews L.H., Mccann O.T.,
AN McClay J., Mclaren S., McMurray A.A., Milne S.A., Mortimore B.J.,
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                      MI13_HUMAN STANDARD; PRT; 863 AA. 08N3F8; 08N3N8; 09BVL9; 09BY92; 09UH43; 09UH44; 15-SEP-2003 (Rel. 42, Created) 15-SEP-2003 (Rel. 42, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update) Molecule interacting with Rab13 (MIRab13).
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Pandjaitan R., Zahraoui A.;
                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE-20057165;
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Homo sapiens (Human).
Homo sapiens (Chordata;
                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM
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                                                                                                                                                                                                                                                                a novel effector of Rab13."; (JUL-2002) to the EMBL/GenBa
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RA Scott C.E., Sehra H.K., Skuce C.D., Smalley 1., Royels L., Ross R.I.,
RA Scott C.E., Sehra H.K., Skuce C.D., Smalley S., Smith M.L.,
RA Vaudin M., Wall M., Wallis J.M., Whiteley M.N., Willey D.L.,
RA Williams L., Williams S.A., Williamson H., Wilmer T.E., Wilming L.,
RA Williams L., Williams S.A., Williamson H., Wilmer T.E., Wilming L.,
RA Williams S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Minoshima S., Kawasaki K., Sasaki T., Asakawa S., Rudoh J.,
RA Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RA Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RA Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RA Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RA Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RA Wang Q., Wang Z., White J., Willier N., Minox P.,
RA Fulton R., Johnson D., Bemis G., Bentley D., Bradshaw H., Bourne S.,
RA Cordes M., Du Z., Fulton L., Goela D., Graves T., Hawkins J.,
RA Scheet P., Walker C., Wamsley A., Wohldmann P., Pepin K., Nelson J.,
RA Scheet P., Walker C., Wamsley A., Wohldmann P., Pepin K., Nelson J.,
RA Korf I., Bedell J.A., Hiller L., Marcils E., Waterston R., Wilson R.,
RA Kamunel B.S., Shaikh T., Kurahashi H., Saitta S., Budarf M.L.,
RA Kim U.J., Shizuya H., Simon M.I., Dumanski J.P., Peyrard M., Kedra D.,
RA Kim U.J., Shizuya H., Simon M.I., Dumanski J.P., Peyrard M., Kedra D.,
RA Wilkinson P., Bodenteich A., Hartman K., Hu X., Khan A.S., Lane L.,
RT "The DNA seculation of human chromosome 27 ".
                                                                                                                                                                            RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheet T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Koewan P.J., McKernan K.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Koewan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Butterfield Y.S.N., Krzywinski M.I., Schautz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RG Generation and initial analysis of more than 15,000 full-length human
"Generation and initial analysis of more than 15,000 full-length human
and mouse cDNA sequences.";
LPCC. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Odell C.m.
Phillips f
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=21156230; PubMed=11258795;
Hirosawa M., Nagase T., Murahashi Y.,
"Identification of novel transcribed
by expressed sequence tag mapping.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ansorge W., Wirkner U., Submitted (JUL-2002) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Choriocarcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Melanoma;
                                            SUBUNIT: Binds to Rabl3.
SIMILARITY: Contains 1 calponin-homology (CH)
SIMILARITY: Contains 1 LIM zinc-binding domair
CAUTION: Ref. 3 (CAD39036) sequence differs fro
CAUTION: Ref.3 (CAD39036) sequence diframeshifts in positions 486 and 507.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.A.
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           Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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; AL022311; CAB62980.1; -.

L; AL022311; CAB62979.1; -.

L; AL022311; CAB62978.1; ALT_SEQ.

L; AL022311; CAB52978.1; ALT_FRAME.

L; AL834373; CAD39036.1; ALT_FRAME.

L; AL83460; CAD38718.1; -.

L; AB051455; BAB33338.1; -.

L; BC001090; AAH01090.1; ALT_INIT.
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PS00478; LIM_DOMAIN_1;
PS50023; LIM_DOMAIN_2;
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IPR001715; Calponin-like.
IPR001781; LIM.
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RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almedda J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler R.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
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RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Phillimore B.J.C.T., Prathalingus S.R., Plumb R.W., Ramasy H.,
RA Swann R.M., Sycamore N., Fatel R., Pearce T.A.V., Peck A.I.,
RA Whitehead S.L., Whittaker P., Williams S.A., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Wilming L., Wary P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                   RA Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Scheetz T.E., RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carvaint T.L., Scheetz T.E., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carvaint P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Bukesley R.W., Touchman J.W., Gren E.D., Dickson M.C., RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E., RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E., Jones S.J.M., Marra M.A., mann and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                     human and mo
Proc. Natl.
-!- ALTERNAT
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Muscle;
MEDLINE=22388257; PubMed=12477932;
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                                                     c. Natl. Acad. Sci. U. ALTERNATIVE PRODUCTS:
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414:865-871(2001).
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S., Nomura R.,
    Named isoforms-2;
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v., Saito
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Matches 58
                                   15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
16-OCT-2001 (Rel. 40, Last annotation update)
Forkhead box protein G1A (Forkhead related protein FKHL2)
(Transcription factor BF-2) (Brain factor 2) (BF2) (CBF-2) (T-14-6)
FOXG1A OR FKHL2 OR HFHBF2.

Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianir
                               Archosauria; Aves; Gallus.
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SEQUENCE
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EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -i- SIMILARITY: Contains 1 HMG box domain.
-i- CAUTION: It is uncertain whether Met-1 or Met-52 is the initiator.
-i- CAUTION: Ref.1 (CAC36288), sequence differs from that shown due to
                 NCBI_TaxID=9031;
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L; AL034419; CAD43477.1; -.
L; AL034419; CAD43477.1; -.
L; AL121587; CAC36288.1; ALT_SEQ.
L; BC007636; AAH07636.1; -.
ew; HGNC:16055; CZ0orf100.
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Name=2;
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PE; PS50118; HMG_BOX_2; 1.
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RESULT 8
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VP40_HCMVA (
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01-AUG-1990 (Re:
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PRODOM; PD000425; TF_FORk_head; 1.

SMART; SM00339; FH; 1.

PROSITE; PS00659; FORK_HEAD_1; 1.

PROSITE; PS00658; FORK_HEAD_2; 1.

PROSITE; PS50039; FORK_HEAD_3; 1.
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DOMAIN
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Pfam; PF00250; Fork_head; 1.
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HSSP; Q63245; 2HFH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-White leghorn; TISSUE-Retina;
MEDLINE-96338226; PubMed-8757134;
                                                                                                                                                                                                                                                                                                                               DNA_BIND
                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                            Developmental
                                                                                                                                                                                                                                                                                                                                                                                                                        Transcription regulation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yuasa J., Hirano S., Yamagata M., Noda M.; "Visual projection map specified by topogr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELULAR LOCATION: Nuclear (Potential).

TISSUE SPECIFICITY: Retina.

DEVELOPMENTAL STAGE: CAN BE DETECTED IN REGIONS INCLUDING
PRIMORDIAL RETINA AND NEUROEPITHELIUM BY EMBRYONIC DAY 2 (E2)
E3, EXPRESSED IN THE TEMPORAL RETINA AND ASSOCIATED PIGMENT
EPITHELIUM AS WELL AS IN PART OF THE DIENCEPHALON, AND AT E7
EXPRESSED IN RETINAL GANGLION CELLS. LEVELS BEGIN TO DECLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Ew European Bioinformatics Institute. There are no restr by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E4 AND ALMOST DISAPPEAR BY E10. SIMILARITY: Contains 1 fork-head domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: MAY DETERMINE THE NASOTEMPORAL AXIS OF THE RETINA, AND CONSEQUENTLY SPECIFY THE TOPOGRAPHICAL PROJECTION OF THE RETINAL GANGLION-CELL AXONS TO THE TECTUM BY CONTROLLING EXPRESSION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THEIR TARGET GENES
                                                                                                                  188
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                                                                                         APAA
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                                                                                                                                             SPFSIESIIG
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                         STANDARD;
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                                                                                                                                                                                                                                                               8.98;
                                                                                                                                            GGPGPGLGA----GPAPGAGGSCASQSGAATGLSRSLGSGL-----
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                                                                                                                                                                                                                                                                                                       WW;
                                                                                                                                                                                                                                                                                                                                                                                                                    DNA-binding; Nuclear protein;
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                                                                                                                                                                                                                                                                                                                             POLY-ALA.
POLY-GLY.
FORK-HEAD.
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POLY-GLU.
POLY-GLY.
                                                                                                                                                                                                                                                              Score 107.5;
Pred. No. 2.
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82266C2E1E103A48 CRC64;
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Mismatches
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RX MEDLINE-96399137; PubMed-8805708;
RX Shieh H.-S., Kurumbail R.G., Stevens A.M., Stegeman R.A.,
RA Shieh H.-S., Kurumbail R.G., Stevens A.M., Stegeman R.A.,
RA Sturman E.J., Pak J.Y., Wittwer A.J., Palmier M.O., Wiegand R.C.,
RA Sturman E.J., Pak J.Y., Wittwer A.J., Palmier M.O., Wiegand R.C.,
RA Holwerda B.C., Stallings W.C.;
RA Holwerda B.C., Stallings W.C.;
RI Hature 383:279-282(1996).
CC -1 FUNCTION: THE CAPSID ASSEMBLY PROTEIN IS A COMPONENT OF THE CAPSID
CC CORE INVOLVED IN PROCESSING AND PACKAGING OF PROGENY DNA.
CC CORE INVOLVED IN PROCESSING AND PACKAGING OF PROGENY DNA.
CC ASSEMBLY A PROTEIN AND THE C-TERMINUS.
CC -1- CAPSID ASSEMBLY PROTEIN AT THE C-TERMINUS.
CC -1- CATALYTIC ACTIVITY: Cleaves -Ala-|-Ser- and -Ala-|-Ala- bonds in
CC the scaffold protein.
CC -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S21.
CC -1- SIMILARITY: TO OTHER HERPESVIRUSES CAPSID PROTEIN VP40.
  X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF PROTEASE.
MEDLINE-96399136; PubMed-8805707;
Qiu X., Culp J.S., Dilella A.G., Hellmig B., Hoog S.S., Jan
Smith W.W., Abdel-Meguid S.A.;
"Unique fold and active site in cytomegalovirus protease.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-AUG-1990 (Rel. 15, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Capsid protein P40 [Contains: Assemblin (Protuce)
Capsid assembly protein].
UL80 OR APNG.
                                                                                                                                                                                                                                            the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                        This
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chee M.S., Bankier A.T., Beck S., Bohni R., Brown C.M., Cerny Horsnell T., Hutchison C.A. III, Kouzarides T., Martignetti J. Preddle E., Satchwell S.C., Tomlinson P., Weston K.M., Barrell "Analysis of the protein-coding content of the sequence of hum cytomegalovirus strain AD169.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chee M.S., Ba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-90269039; PubMed-2161319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  viruses; dsDNA viruses, no RNA stage;
Betaherpesvirinae; Cytomegalovirus.
NCBT TARTIN-10360
                                                                                                                                                                                                                            entities requires a license agreement
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                                                        lied;
                                                                                                                                                                                                                                                                                     SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                             1WPO;
                                                                                                                  LCMV;
                                                                                                                                                          S09843; QQBEB8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cytomegalovirus protease.";
e 383:272-275(1996).
                                                                                                                                                                     X17403; CAA35353.1;
X17403; CAA35354.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             383:275-279(1996).
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06-JUN-01.
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06-JUN-01.
12-SEP-01.
11-SEP-01.
11-FEB-03.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bonneau P.R.,
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                                                                                                                  SEQUENCE
                                                                                                                         HELIX
                                                                                                                                                                                              HELIX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                1NKK;
1NKK;
 155
            317
                                      257
                                                               199
                                                  80
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                                                                                        69;
                                                                                              Similarity
LDLLGPATGCLLDD----GLEGLFEDIDTSMYDNELWAPASEGLKPGP-EDGPGKEEAPE
                      ADNILASSDAALSASMASILEDISHIEGISQAPQPI-----ADEGPPGRSIGGAAPSIGA
                                                   SMAPAAAL ---
                                                                          WLDPGHAAV-AQAPPAVASS-SLFDLSVLKLHHSLQQSEPDLRH----LVLVVNTLRRIQA
            ---LPAESPPSLSPSEPAEAASMSH------PLSAAVPAATAPPGATVAGASPAVSS
                                     SVSPEAACDIKAASAERSGDSRSQAATPAAGARVPSSSPSPPVEPPSPVQPPALPASPSV
                                                              WQRCGSTAVDASGDPFRSDSYGLLGNSVDALY--IRERLPKLRYDKQLVGVTERESYVKA
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                                                                                                                247
708
                                                                                        Conservative
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27
30
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36
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62
64
79
91
102
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                                                                                                                249
73851 MW;
                                                                                                                              24453
                                                                                             8.9%;
27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                  Serine protease; Phosphorylation;
                                                                                                                                                                                                                                                                                                                              CAPSID ASSEMBLY PROTEIN (BY SIMILARITY).
C-TERMINAL PEPTIDE (BY SIMILARITY).
GENE ULBO PROTEIN.
GENE ULBO.5 PROTEIN.
GENE ULBO.4 PROTEIN.
GENE ULBO.3 PROTEIN.
CLEAVAGE (BY THE PROTEASE).
CLEAVAGE (BY THE PROTEASE).
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                        24;
                                                                                       Score 107.5;
Pred. No. 4.1;
24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     ASSEMBLIN (PROTEASE)
                                                                                                                  32A993D6586824C9 CRC64;
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                                                                                                    DΒ
                                                                                        85;
                                                                                                    1;
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                                                                                        Indels
                                                                                                   708;
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RESULT 9
DUSS_MOUSE
ID DUSS_M
AC 009112
DT 15-JULL
DC NABMINI
OC NABMINI
CC HEALT
CC -1- FILL
CC -1- FILL
CC -1- FILL
CC -1- SILL
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17 15-JUL-1999 (Rel. 38, Last sequence updated)
18 -FEB-2003 (Rel. 41, Last annotation updated)
19 Dual specificity protein phosphatase 8 (
(Neuronal tyrosine threonine phosphatase DUSP8 OR NTTP1.
                       DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                             PROSITE;
PROSITE;
PROSITE;
PROSITE;
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InterPro; IPR001763; Rhodanese-like.
InterPro; IPR000387; TYR_phosphatase.
Pfam; PF00782; DSPc; 1.
SMART; SM00195; DSPC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modified and this statement is not removed, entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Theodosiou A.M., Rodriques N.R., Nesbit M.A., Ambrose H.J.,
Paterson H., McLellan-Arnold E., Boyd Y., Leversha M.A., Owen N.,
Blake D.J., Ashworth A., Davies K.E.,
"A member of the MAP kinase phosphatase gene family in mouse
containing a complex trinucleotide repeat in the coding region.";
Hum. MO1. Genet. 5:675-684(1996).
-1- FUNCTION: THIS PROTEIN SHOWS BOTH ACTIVITY TOWARD TYROSINE-PROTEIN
PHOSPHATE AS WELL AS WITH SERINE/THREONINE-PROTEIN PHOSPHATE (BY
                                                                                                                                                             Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X95518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DUS8_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE SPECIFICITY: EXPRESSED PREDOMINANTLY IN BRAIN AND SIMILARITY: BELONGS TO THE NON-RECEPTOR CLAYS OF THE PRO TYROSINE PHOSPHAPASE FAMILY. DUAL SPECIFICITY SUBFAMILY. SIMILARITY: Contains 1 rhodanese domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATALYTIC ACTIVITY: Protein tyrosine phosphate tyrosine + phosphate.
CATALYTIC ACTIVITY: A phosphoprotein + H(2)0 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Cytoplasmic and nuclear.
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sen the Swiss Institute of Bioinformatics and the EN
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                                                                                                                                                                               PS50056;
PS50054;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            non-profit institutions as long
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                                                                                                                                                                          TYR_PHOSPHATASE_1; 1.
TYR_PHOSPHATASE_2; 1.
TYR_PHOSPHATASE_DUAL;
                                                                                                                                                                                                                                                  RHODANESE_3; 1.
  138
138
432
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Rodentia;
                    PROTEIN-TYROSINE |
POLY-ARG.
POLY-SER.
POLY-GLY.
POLY-SER.
                                                                                                                                     RHODANESE
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  PRO-RICH
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8 (EC 3.1.3.48)
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                                                                                                                 PHOSPHATASE
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; Murinae; Mus
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RESULT 10
CRC4_HUMAN
ID CNG4_HUMAN
AC Q14028; Q14-0
DT Q1-NOV-1997
DC Q1-10-NO-1997
RN Q1]
CC GN CNGB1 QR
RT TAIDE-932:
RN FEDLINE-932:
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Best Local
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                                                                                                             EMBL; L15296;
EMBL; L15297;
MIM; 600724;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACT_SITE SEQUENCE
                                                                                                                                                                                                     the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       014028; Q14029;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Cyclic-nucleotide-gated cation channel 4 (CNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen T.Y., Peng Y.-W., Dhallan R.S., Ahamed B., "A new subunit of the cyclic nucleotide-gated coretinal rods.", retinal rods.", Nature 362:764-767(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CNGB1 OR CNCG4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=93226050;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Retina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CNG4) (Cyclic
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GO:0017071; C:intracellular cyclic nucleotide activated GO:0005222; F:intracellular cAMP activated cation channe erPro; IPR000595; cNMP_binding.
erPro; IPR005821; Ion_trans.
erPro; IPR001622; K+channel_pore.
                                                                                                                                                                                                                                                                                                                                                                                                          ISOId=Q14028-2;
SIMILARITY: BELONG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Integral membrane pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Integral ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                            FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=RCNC2A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Event=Alternative Name=RCNC2B;
                                                                                                                                                                                                                                                                                                                  SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the El
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           409
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663 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                       AAA65620.1; -.
AAA65619.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                            028-2; Sequence=VSP_001110;
BELONGS TO THE CYCLIC NUCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=7682292;
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68847 MW;
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26.6%;
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Pred. No. 4.
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RESULT
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Best Local
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NP_BIND
BINDING
BINDING
                   STRAIN-RCR2011 / SU47;
MEDLINB-20255031; PubMed-10796014;
Cabanes D., Boistard P., Batut J.;
Cabanes D., Boistard P., Batut J.;
"Symbiotic induction of pyruvate dehydrogenase sinorhizobium meliloti.";
Mol. Plant Microbe Interact. 13:483-493(2000).
                                                                                                                                                                                                                             O9R9N3;
30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
30-MAY-2000 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Dihydrolipoamide acetyltransferase component of pyruvate del
complex (EC 2.3.1.12) (E2).
DDHC OR PDHB OR R01447 OR SMC01032.
Rhizobium meliloti (Sinorhizobium meliloti).
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Sinorhizobium/Ensifer group; Sinorhizobium.
                                                                                                                                        SEQUENCE FROM N.A. STRAIN=RCR2011 / S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RHIME
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TRANSMEM
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DOMAIN
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PROSITE; PS00889; CNMP_BINDING_2; 1.
PROSITE; PS50042; CNMP_BINDING_3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ODP2_RHIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                          NCBI_TaxID=382;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ERTEKVKEKLIDPDVTSDEESPKPSPAKKAPEPAPDTKPAEAE-PVEEEHYCDML
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EGLSQAPQPLADEGPP-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VNTLRRIQASMAPAAALPPVPS----PPAAPSVADNLLASSDAALS--ASMASLLEDLSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQSEPDLRHLVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nnel; Ion transport; camp-binding; Transmembrane;
family; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                909
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
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21.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34;
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#I (POTENTIAL).

EXTRACELLULAR (POTENTIAL).

#2 (POTENTIAL).

#2 (POTENTIAL).

#3 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H5 (POTENTIAL).
EXTRACELLULAR (I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -AETKEEPEAEAEAASSGVPATKQHPEVQVEDTD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----APASEGLKPGPEDGPGKEEAPELDEAELDYL
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Pred. No. 6.
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POLY-GLU.
CAMP (BY SIMILARITY).
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CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Missing (in isoform RCNC2A)
/FTId=VSP_001110.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DC0E754336B6EDDD CRC64;
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                                                                                                                                                                                                                                                                                                                                           ion update)
component of pyruvate dehydrogenase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447
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                                                                    genes
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -TNSAIINDRLQELVKLFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61;
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RESULT 12
FMN2_MOUSE
ID FMN2_MOUSE
AC Q9JL04
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Boistard P., Becker A., Boutry M., Cadieu E., Dreano S., Gloux S.,
Godrie T., Coffeau A., Kahn D., Kiss E., Lelaure V., Masuy D.,
Pohl T., Portetelle D., Puehler A., Purnelle B., Ramsperger U.,
Renard C., Thebault P., Vandenbol M., Weidner S., Galibert F.;
*Analysis of the chromosome sequence of the legume symbiont
sinorhizobium mellioti strain 1021.*;
Proc. Natl. Acad. Sci. U.S.A. 98:9877-9882(2001).
-i- FUNCTION: THE PYRUVATE DETYDROGENASE COMPLEX CATALYZES THE OVERALL
CONVERSION OF PURUVATE TO ACETYL-COA & CO(2). IT CONTAINS MULTIPLE
COPTES OF THREE ENZYMATE COMPONENTS: PURUVATE DETYDROGENASE (E1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glycolysis; Transferase; Acyltransferase; Lipoyl; Complete proteome.
BINDING 43 43 LIPOYL (BY SIMILARITY).
ACT_SITE 420 420 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProDom; PD001115; 20xoacid_dh; 1.
TIGREAMS; TIGR01349; PDHac_trf_mito;
PROSITE; PS00189; LIPOYL; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN-1021;
MEDLINE-21396507; PubMed-11481430;
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CATALYTIC ACTIVITY: Acetyl-CoA + dihydrolipoamide = CoA + S-acetyldihydrolipoamide.

COFACTOR: THE E2 COMPONENT CONTAINS ONE COVALENTLY-BOUND LIPOYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO THE 2-OXOACID DEHYDROGENASE FAMILY. SIMILARITY: Contains 1 lipoyl-binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COFACTOR (BY SIMILARITY).
SUBUNIT: FORMS A 24-POLYPEPTIDE STRUCTURAL CORE WITH OCTAHEDRAL SYMMETRY (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DIHYDROLIPOAMIDE ACETYLTRANSFERASE (E2) & LIPOAMIDE
                                                                                                                                                                                                                                                                                                                                                                                                                   113
                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                 164
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AL591787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF00198; 2-oxoacid_dh; 1.
PF00364; biotin_lipoyl; 1.
PF02817; e3_binding; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P07016; 1BBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                            ---PGSYELV--PHDGMRKTIAKRLVESKQTIPHFYVSVDCELDALM
                                                                                                                                                                                                                                                                                           ---SGPHGRVVKKDVETAVSGGAAKPAGA-PAAAPAPATL----AKGMSEDAVLKLFE--
                                                                                                                                                                                                                                                                                                                                                  LADEGPPGRSI-------GGAAPSLGALDLLGPATGCLLDDGLEGLFEDIDTSMYDNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASMAPAAALPPVPSPPAAPSVAD----NLLASSDAALSASMASLLEDLSHIEGLSQAPQP
                                                                                                                                                                                                                                      LWAPASEGLKPGPEDGPGKEEAPELDEA------
                                                                                                                                                                                                                                                                                                                                                                                                                AAPAPAAAPAPQAAAPASPAPADGEGKRIFSSPLARRLAKEAGI--DLSAIAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
447 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; AceF_long.
; Biotin_lipoyl.
; E3_binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46140 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.7%;
31.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14; Mismatches
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POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 105;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48B1CAC4E2FDC2AC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51;
                                                                                                                                                                                                                                   ----ELDYLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
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                                                                                                                                                                                                                                   219
                                                                                                                                                                            255
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                                                                                                                                                                                                                                                                                                                                                     185
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FMN2_MOUSE Q9JL04;

STANDARD;

PRT;

1567 Ą

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DOMAIN 64
DOMAIN 73
                    REPEAT
REPEAT
DOMAIN
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Formin-2, a novel for
subfamily, is highly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF02181; FH2; 1. PRINTS; PR00828; FORMIN. SMART; SM00498; FH2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mech.
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Mammalia; 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-20245324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Leader B., Leder P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h. Dev. 93:221-231(2000).
TISSUE SPECIFICITY: EXPRESS
AND MATURE CENTRAL NERVOUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: Contains 1 Formin homology 1 (FH1) domain.
SIMILARITY: Contains 1 Formin homology 2 (FH2) domain.
SIMILARITY: BELONGS TO THE FORMIN HOMOLOGY FAMILY. CAPPUCCINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         European Bioinformatics Institute.
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IPR001265; Formin.
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Rodentia;
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11 X 11 AA TANDEM REPEATS OF [MV]-G-I-P-
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Matches 64
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Q61548; Q61547;
Q1-NOV-1997 (Re
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                                                                                                                                                  cloning and sequence analysis of the F1-20 protein.";

J. Neurosci. 12:2144-2155(1992).

-I- FUNCTION: ADAPTINS ARE COMPONENTS OF THE ADAPTOR COMPLEXES WHICH
-I- FUNCTION: ADAPTINS ARE COMPONENTS OF THE ADAPTOR COMPLEXES WHICH
LINK CLATHRIN TO RECEPTORS IN COATED VESICLES. CLATHRIN-ASSOCIATED
PROTEIN COMPLEXES ARE BELIEVED TO INTERACT WITH THE CYTOPLASMIC
TAILS OF MEMBRANE PROTEINS, LEADING TO THEIR SELECTION AND
                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10090;
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01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
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                                                                                                                                                                                                                                                                                                                       Zhou S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
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                                                                                                                                                                                                                                                                                                                                          MEDLINE=92300439; PubMed=1607933;
                                                                                                                                                                                                                                                                        'Characterization of a novel synapse-specific protein. cloning and sequence analysis of the F1-20 protein.";
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                                                        TAILS OF MEMBRANE PROTEINS, LEADING TO THEIR SELECTION AND CONCENTRATION. BINDING OF AP180 TO CLATHRIN TRISKELIA INDUCES THEIR ASSEMBLY INTO 60-70 NM COATS.
SUBCELLULAR LOCATION: COMPONENT OF THE COAT SURROUNDING THE CYTOPLASMIC FACE OF COATED VESICLES IN THE PLASMA MEMBRANE.
                                            ALTERNATIVE PRODUCTS
                  Event=Alternative splicing; Named
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             003 (Rel. 41, Last annotation update)
coat assembly protein AP180 (Clathrin coat associated protein
91 kDa synaptosomal-associated protein) (Phosphoprotein F1-
                                                                                                                                                                                                                                                                                                                    Sousa R.,
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W; 8F273B1C88505944 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Sciurognathi; Muridae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Muridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Murinae;
                                                                                                                                                                                                                                                                                               II.
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RESULT 14

SRCA_RABIT
ID SRCA_R
AC P13666
DT 01-JAN
DT 01-SEP
DE Sarcal
OS Orycto
OC Eukary
OC Mammal
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Best Local
                                                            01-JAN-1990
01-JAN-1990
15-SEP-2003
Sarcalumenin precursor.
Oryctolagus cuniculus (Rabbit).
Oryctolagus cuniculus (Chordata; Craniata;
Transta: Metazoa; Chordata; Craniata;
                                                                                                     SRCA_RABIT
P13666;
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DOMAIN
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InterPro; IPR001026; ENTH.
Pfam; PF01417; ENTH; 1.
SMART; SM00273; ENTH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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DEVELOPMENTAL STAGE: DEVELOPMENTALLY REGULATED IN A PATTERN
COINCIDENT WITH ACTIVE SYNAPTOGENESIS AND SYNAPTIC MATURATION.
DOMAIN: POSSESSES A THREE DOMAIN STRUCTURE: THE N-TERMINAL 300
RESIDUES HARBOR A CLATHRIN BINDING SITE, AN ACIDIC MIDDLE DOMAIN
450 RESIDUES, INTERRUPTED BY AN ALA-RICH SEGMENT, AND THE C-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A44825; A44825
MGI:109132; Sna
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M83985; AAA37586.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q61548-1; Sequence=Displayed;
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                                                                                                                                                                                                                                                       DLLAGFGGSFMAPSTTPVTPAQNNLLQPSFEAAFGTTPSTSSSSSFDPSVFDGLGDLLMP
                                                                                                                                                                                                                                                                                 ----YDNELWAPASEGLKPGPED-------GPGKEEAPELDEAELDYLMDVLVG
                                                                                                                                                                                                                                                                                                                 APSPASTASP
                                                                                                                                                                                                                                                                                                                                               APQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFED-----IDTSM---
                                                                                                                                                                                                                                                                                                                                                                         DIFGDLFDSAPEVAAAPKPDAAPSIDLFGTDAFSSPPRGASPVPESSLTADLLSVDAFA-
                                                                                                                                                                                                                                                                                                                                                                                                                                       APSPAPTAVAATAATTTA----
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                                                          (Rel. 13, Created)
(Rel. 13, Last sequence)
(Rel. 42, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alternative splicing; Phosphorylation.
410 413 POLY-THR.
535 539 POLY-ALA.
547 550 POLY-ALA.
659 664 POLY-SER.
704 710 POLY-SER.
715 719 Missing (in isoform Sh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                      STANDARD;
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POLY-SER.
POLY-SER.
POLY-SER.
Missing (in isoform short).
/FIId-VSP_000172.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 102.5;
                                                                                                                      PRT;
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 Leporidae;
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                                                          update)
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               Vertebrata; Euteleostomi;
Oryctolagus
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RESULT 15 CA1H_HUMAN

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Best Local :
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SEQUENCE
                                                                                                                                                                                                                                                                                                                          CARBOHYD
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE-89345602; PubMed=2762314;
Leberer E., Charuk J.H.M., Green N.M., Maclennan D.I
"Molecular cloning and expression of cDNA encoding a
binding glycoprotein from sarcoplasmic reticulum.";
Proc. Natl. Acad. Sci. U.S.A. 86:6047-6051(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (Some send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Molecular cloning and expression of cDNA encoding of glycoprotein of rabbit skeletal muscle sarcoplasmic J. Biol. Chem. 264:3484-3493(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORM 2).
MEDLINE-89123480; PubMed-2521635;
Leberer E., Charuk J.H.M., Clarke
                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                           Calcium-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A33280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biol. Chem. 264:3484-3493(1989).
-I- FUNCTION: PERHAPS INVOLVED IN THE REGULATION OF CALCIUM TRANSPORT.
-I- SUBCELLULAR LOCATION: SARCOPLASMIC RETICULUM LUMEN. ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            McLennan D.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9986;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THROUGH CA(2+) WITH THE MEMBRANE. ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=2; Synonyms=58 kDa;
IsoId=P13666-2; Sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event=Alternative splicing; Named iso
Name=1; Synonyms=160 kDa;
IsoId=P13666-1; Sequence=Displayed;
                           180
                                                       133
 193
                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                     M25750; AAA31189.1;
J04480; AAA60730.1;
                                                                                                            76
                                                                                                                                        78
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note=No experimental confirmation available;
                                                                                                                                                                                                                                        Similarity
QGAAAETAEPEASGIAPSSEDEQIHTLEGEGKGSPGPDHGPTELDGTPD---GASAGEEP
                           SMYDNELWAPASEGLKPGPED---
                                                      GDEGSLQEERQELSSGEGPGEEAAGLGLPSEGAASGEMQGQAGGGKVPKEAEGVLGDSPV
                                                                                                                                                                                            AVAQAPPAVASSSLFDLSVLKLHH-----SLQQSE-----PDLRHLVLVVNTLRRI
                                                                              SHIEGLSQAPQPLAD-EGPPGRSIGGAAPSLGAL--DLLGPATGCLLDDGLEGLFEDIDT
                                                                                                            ESAERTTAGAPPAAPGPGSEPEAS----LPNASATESAPPGDATGPREEQGPAAASALPPG
                                                                                                                                        QASMAPAAALPP-VPSPPAAPSVADNLLASSDAALSA-----SMASLLEDL
                                                                                                                                                                                                                                                                              474
908
                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         A33280
                                                                                                                                                                                                                                                                                                                                                                                                            Glycoprotein;
                                                                                                                                                                  -ASGGTEDVGNLLENHFSAGDASLEEKERALYADAAPRDENLLLHYPDGREA
                                                                                                                                                                                                                                                                                  474
97920
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457
102
716
824
455
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26.2%;
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N-LINKED (GLCNAC. . .) (I

N-LINKED (GLCNAC. . .) (I

M185ing (in isoform 2).

/FTId=VSP_004429.

Q -> E (IN REF 2).

Q -> E (IN REF 2).
                                                                                                                                                                                                                                        Score 102.5;
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                  ACIDIC DOMAIN,
                                                                                                                                                                                                                                                                                                                                                                                                  SARCALUMENIN
                                                                                                                                                                                                                                                                                                                                                                                                                           Signal; Alternative
                                                                                                                                                                                                                           Mismatches
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                           -GPGK-EEAPELDEAELDYLMDVLVGTQALERP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               isoforms=2;
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                                                                                                                                                                                                                           104;
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                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                     Length 908;
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249
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RA Park H.-S., Toyoda A., Ishii K., Totoki Y., Choi D.-K., Groner Y.,
RA Soeda E., Ohki M., Takagi T., Sakaki Y., Taudien S., Blechschmidt K.,
RA Polley A., Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,
RA Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.,
RA Rosenthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S.,
RA Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
RA Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
RA Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Bloecker H.,
RA Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E.,
RA Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F.,
RA Lehrach H., Reinhardt R., Yaspo M.-L.;
"The DNA sequence of human chromosome 21.";
N [3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE-98164096; PubMed-9503365;
MEDLINE-98164096; PubMed-9503365;
Saarela J. Xlikarppa R., Rehn M., Pu
"Complete primary structure of two va
"Complete primary structure of two va
collagen and tissue-specific differen
corresponding transcripts.";
Matrix Biol. 16:319-328(1998).
Tughetti P., Suzuki O., Godoi P.H., Alves V.A., Sertie A.L., Zorick T., Soares F., Camargo A., Moreira E.S., di Loreto C., Moreira-Filho C.A., Simpson A., Oliva G., Passos-Bueno M.R.; "A polymorphism in endostatin, an angiogenesis inhibitor, predisposes for the development of prostatic adenocarcinoma."; Cancer Res. 61:7375-7378(2001).

-i- FUNCTION: COLAIBA PROBABLY PLAYS A MAJOR ROLE IN DETERMINING THE RETINAL STRUCTURE AS WELL AS IN THE CLOSURE OF THE NEGRAL TUBE.
                                                                                                                                                                                                                                                            and tumor growth, plays a critical rostructure and in neural tube closure. Hum. Mol. Genet. 9:2051-2058(2000).
                                                                                                                                                                                                                                                                                           Passos-Bueno M.R.;
Passos-Bueno M.R.;
"Collagen XVIII, containing an endogenous collagen XVIII, plays a critical role in the collage of the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning of cDNA and genomic DNA er and localization of the alpha 1(XVI chromosome 10 and human chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Olsen B.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 834-1516 FROM N.A. MEDLINE=94245237; PubMed=8188291; Oh S.P., Warman M.L., Seldin M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p39060; Q9UK38; Q9Y6Q7; Q9Y6Q8; (01-FEB-1995 (Rel. 31, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Collagen alpha 1(XVIII) chain precursor [Cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA1H_HUMAN
P39060; Q90
                                                                                                                                                                                              VARIANT ASN-1437.
MEDLINE-21518361;
                                                                                                                                                                                                                                                                                                                                                                         Sertie A.L.,
                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20400145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhi-Yong
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                                                                                                                                                                                                                                                                                                                                                                                                                 INVOLVEMENT IN KNOBLOCH
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Mammalia; Eutheria;
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PTM: Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains. POLYMORPHISM: There is an association between a polymorphism in position 1437 and prostate cancer. Heteroxygous Asn-1437 individuals have a 2.5 times increased chance of developing prostate cancer as compared with homozygous Asp-1437 individuals. DISEASE: Defects in COL1881 are a cause of Knobloch syndrome (KNO [MIM:267750]; an autosomal recessive disorder defined by the occurrence of high myopia, vitreoretinal degeneration with retina detachment, macular abnormalities and occipital encephalocele. SIMILARITY: BELONGS TO THE FIRRIL-ASSOCIATED COLLAGENS WITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=Long; Synonyms=NC-493;
IsoId=P39060-1; Sequence=Displayed;
Name=Short; Synonyms=NC1-303;
IsoId=P39060-2; Sequence=VSP_001155, V
TISSUE SPECIFICITY: PRESENT IN MULTIPLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROLIFERATION AND ANGIOGENESIS. MAY INHIBIT ANGIOGENESIS BY BINDING TO THE HEPARAN SULPHATE PROTEOGLYCANS INVOLVED IN GROWTH FACTOR SIGNALLING.
INTERRUPTED HELICES (FACIT) FAMILY.
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E ORGANS WIT
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MIM; 120328; ...

RMIM; 267750; ...

RMIM; 267750; ...

RMIM; 267750; ...

RGO; GO:0005581; C:collagen; TAS.

RGO; GO:0008181; F:tumor suppressor; TAS.

RGO; GO:0008181; F:tumor suppressor; TAS.

RGO; GO:0007397; P:histogenesis and organogenesis; TAS.

RGO; GO:0007895; P:negative regulation of cell proliferation; TAS.

RGO; GO:0007046; P:oncogenesis; TAS.

RGO; GO:0007061; P:vision; TAS.

RGO; GO:0007601; P:vision; TAS.

RGO;
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SM00210; TSPN;
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NONHELICAL REGION 7 (COT7).

TRIPLE-HELICAL REGION 8 (COB).

NONHELICAL REGION 8 (COB).

TRIPLE-HELICAL REGION 9 (COL8).

NONHELICAL REGION 9 (COL9).

TRIPLE-HELICAL REGION 10 (COL9).

NONHELICAL REGION 10 (COL10).

TRIPLE-HELICAL REGION 10 (COL10).

NONHELICAL REGION 11 (COL1).

N-LINKED (GLCNAC. . .) (POTENTIAL).

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SUMMARIES

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134	152	165	170	213	213	214	215	215	215	792	968	1032	1044	1206	1210	Score
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202	237	241	241	196	196	197	309	309	309	244	223	236	236	236	236	Length DB
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Q9NWK7	Q9CWM2	Q9BXL8	Q8TB18	Q9UJW9	Q96CQ2	Q9ERC3	080609	Q9JJG5	Q91WL3	Q9DCZ2	Q925E6	Q9D888	Q9JL10	Q9BUE7	Q9UHV2	ID
homo	mus	Q9bx18 homo sapien	homo	Q9ujw9 homo sapien	homo	mus	Q8c609 mus musculu	mus	mus	mus	mus	mus	Bum	U	Q9uhv2 homo sapien	Description

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
104	106	106	106.5	106.5	106.5	106.5	107	107	107	108	108.5	109	109	110	112	112	113	114	114	114	115	115	115.5	117		•	121.5	•
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Q8CFW3	Q9нсс9	Q8HAP5	Q9UMG2	043636	087124	Q9HPL5	Q8CB63	035211	Q8CHE2	Q9ZIW5	060336	Q65575	Q8N3N8	Q921E8	Q9BY92	Q9H0L5	Q9QXM1	015021	Q9NE28	Q8IXT4	Q9FED4	Q9FE49	Q8N3F8	Q8VDZ3	269088	Q8LK21	035788	Q925E5
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ALIGNMENTS

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RESULT 1
Q9UHV2
        A CONTRACTOR OF THE PROPERTY O
SEQUENCE FROM N.A.

RIGHER M.J., Braun A.C., Montoya M.A., Chung M.-W., Nguyen C.

Riguyen D.A., Livingston R.J., Poel C.L., Robertson P.D.,

Schackwitz W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.;

Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AF1366402; AAF08349.1; -.

EMBL; AF366402; AAK52831.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

MEDLINE-20047903; PubMed-10580009;

MEDLINE-20047903; PubMed-10580009;

Sugimoto M., Nakamura T., Ohtani N., Hampson L., Hampsup Shimamoto A., Furuichi Y., Okumura K., Niwa S., Taya Regulation of CDK4 activity by a novel CDK4 binding p34SEII.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINE-21231173; PubMed=11331592;

Hsu S.I., Yang C.M., Sim K.G., Hentschel D.M., O'Leary E.,

Bonventre J.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
CDK4-binding protein p34SEII (TRIP-BrI) (SCDK4-binding
                                                                                                                                                                                                                                                                                                                                                    "TRIP-Br: a novel family of PHD zinc finger- and bromodomain-interacting proteins that regulate the transcriptional activi E2F-1/DP-1.";
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Strausberg R.;
Submitted (FEB-2001)
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Homo sapiens (Human).
Eukaryota: Metazoa; Chordata;
Mammalia: Eutheria; Primates;
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BC002670; AAH02670.1; -.
NCE 236 AA; 24703 MW; 8659505783FBF5/
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AA; 24673 MW;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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STRAIN=C57BL/6J; TISSUE=Embryo;
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SEI1 OR 1110032C13RIK.
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E2F-1/DP-1.";
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M., Sim K.G., Hentschel D.M.,
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A Arakawa T., Hara A., Fukunishi Y., Kondo S., Yamanaka I.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Kochiwa H.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Schriml L.M., Stabbli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Schriml L.M., Stabbli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Blake J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Blake J., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
A Gustincich S., Hill D., Hofmann M., Rodriguez I., Sakamoto N.,
A Sasaki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
A Hayashtzaki Y.;
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Nature 409:685-690(2001).
EMBL; AK008303; BAB25588.1; -
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MEDLINE=21085660; PubMed=11
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Mammalia; Eutheria;
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Sciurognathi; Muridae;
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STRAIN-C57BL/6J; TISSUE-Kidney;

RC STRAIN-C57BL/6J; TISSUE-Kidney;

RX MEDLINE-2108560; pubMed=11217851;

RA Arakawa T., Bhinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Casavant T.,

RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Schriml I.M., Staubli F., Suzuki R., Tomita M., Wagner I., Washio T.,

RA Sakai K., Okido T., Frurno M., Aono H., Baldarelli R., Barsh G.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

""" Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.

""" Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.
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Best Local
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SEQUENCE FROM N.A.
MEDLINE-21231173; PubMed-11331592;
MEDLINE-21231173; PubMed-11331592;
MEDLINE-21231173; PubMed-11331592;
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SEQUENCE
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Eukaryota; Metazoa; C
Mammalia; Eutheria; R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
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01-JUN-2001
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1110032C13RIK.
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"TRIP-Br: a novel family of PHD
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;; AF366400; AAK52829.1; -.

MGI:1913438; 1110032C13Rik.
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etazoa; Chordata;
theria; Rodentia;
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Sciurognathi;
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thi; Muridae;
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Q91WL3;
Q1-DEC-2001 (TrEMBLrel. 19, Creat
Q1-DEC-2001 (TrEMBLrel. 19, Last
Q1-JUN-2002 (TrEMBLrel. 21, Last
Q1-JUN-2002 (TrEMBLrel. 21, Last
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Submitted (OCT-2001) to the
EMBL; BC014726; AAH14726.1;
MGD; MGI:1931026; AB041541.
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Hypothetical
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Mammalia; Eutheria;
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Hayashizaki Y.;
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             LGPATGCLLDDGLEG-LFEDIDTSMYDNELWAPAS---
                                                         ALDEIEELCPTSTSTEAAHTAAPEGPKGTSSESSVQKPEGPEEGRTDDSRFMDSLPGNFE
                                                                                                                                              DLGSTTPLEACLTPASLLEDDNDDTFCTLQSVHPAAPT----RLSSAALPAEKDSFSS
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                                                                                                                                                                                                                                                                                 LQQSEPDLRHLVLVVNTLRRIQ-----ASMAPA----
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Rodentia;
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27.8%;
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es 87;
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Best Local S
Matches 90
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Q8C609;
Q1-MAR-2003 ()
01-MAR-2003 ()
01-MAR-2003 ()
14ppothetical 1;
Mus musculus
Eukaryota; Me
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STRAIN=C57BL; TISS
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01-JUN-2001
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Hashimoto K.;
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             Metazoa;
                                protein.
(Mouse).
Chordata;
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Craniata;

Vertebrata;

Euteleostomi;

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made by oigo-capping method.";
Submitted (APR-2000) to the EMEL; AB041541; BAA95026.1; -.
MGD; MGI:1931026; AB041541.
SEQUENCE 309 AA; 33282 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'Isolation of full-length cDNA clones
                                                                                                                                                                                                                                                                                                                                                                                                                                               VAPSQPFKMDLTELDHIMEVLVGS
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(TrEMBLrel.)
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O (TrEMBLrel. 15, L)
O (TrEMBLrel. 17, L)
Clone MNCb-1504, 1
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27.8%;
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Last sequence update)
Last annotation update)
, similar to D50917 KIAA0127
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Pred. No. 7.9e-09;
3; Mismatches 87
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                                                           PRT;
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                                 Submitted (JUL-2002) to the EMBL/GenBar
BMBL; AF317202; AAG30951.1; -.
EMBL; BC034886; AAG34886.1; -.
InterPro; IPR000194; ATPASE_ALPHA_BETA; 1
PROSITE; PS00152; ATPASE_ALPHA_BETA; 1
SEQUENCE 197 AA; 21934 MW; CFF6FA4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9ERC3;
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Nature 420:563-573(2002).
EMBL; AK076787; BAC36480.1; -.
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                                                                                                                                                                                TISSUE-Mammary gland;
Strausberg R.;
                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
Cho J.M., Alaoui-Jamali M.A.;
"Cloning of mouse RBT1 cDNA."
                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Replication (Tremble) trans-activator RBT1.
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STRAIN-C57BL/6J; TISSUE-Testis;
MEDLINE-22354683; PubMed-12466851;
                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                        Submitted (OCT-2000)
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Rodentia;
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27.8%;
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17.78;
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Pred. No. 7.9e
33; Mismatches
                                                                                                                                                                                                                                                                          EMBL/GenBank/DDBJ
Score
                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
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                                          CFF6FA4C0A91D7E7
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11;
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197;
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01-DEC-2001 (TrEMBLrel. 1
01-DEC-2001 (TrEMBLrel. 1
01-OCT-2002 (TrEMBLrel. ;
                              Q9UJW9;
Q9UJW9;
01-MAY-2000
01-MAY-2000
01-DEC-2001
RPA-binding
                                                                                                                                                                                                                                                                                                                                                                                          submitted (SEP-2001) to the EMEL; BC014061; AAH14061.1; -.
Hypothetical protein.
SEQUENCE 196 AA; 21768 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical protein.
Homo sapiens (Human).
Eukaryota; Metazoa; Cl
Mammalia; Eutheria; Pu
            Homo sapiens
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                                                                                                                                                       153
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                                                                                                                                                                                                               122 L-SHIEGLSQAPQP-----LADEGPPGRSIGGAAPSLGALDLLLGPATGCLLLDDGLEGLFE | ; ; | | | ; ; | | | ; ; |
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                                                                                                                                                                                                                                                                      64 LRHLVLVVNTLRRIQAS--MAPAAALPPVPSPPAAPSVADNLLASSDAALSASMASLLED
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                                                                                                                                                                                                                                                                                                                                              76;
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                                                                                                                                                                                                                                                                                             4 GLKRKHSDLEEEE----ERWEWSPAGLQSYQQA-----LLRISLDKVQRSLGPRAPS
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                                                                                                                                                     DIDTSAVEKE---PARAPPEP-PHNLFCAPGSWE-----WNELDHIMEIILGS
                                                                                                                                                                           DIDTSMYDNELWAPASEGLKPGPED----GPGKEEAPELDEAELDYLMDVLVGT 225
                                                                                                                                                                                                                                                                                                                    GLKRKREEEEEKEPLAVDSW-WLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQSEPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DIDTSAVEKDVALPPPE----PPHSLFCSPGSWE-----WNELDHIMEIILGS
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                                                                                                                                                                                                  LDTSMDGTEPPQNPVTPLGLQNEVPP-----QPDPVFLEAL--SSRYLGDSGLDDFFL
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                                 ) (TrEMBLrel. 13,
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l (TrEMBLrel. 19,
g trans-activator.
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           (Human)
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Primates;
Chordata;
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                                            Created)
Last sequence update)
Last annotation update)
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Last annotation updat
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                                                                                                                                                                                                                                                                                                                                           Score 213; DB 4;
Pred. No. 6.5e-09;
6; Mismatches 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vo
Catarrhini;
Craniata;
                                                                                            PRT;
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Vertebrata;
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Euteleostomi;
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Best Local S
Matches 76
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Homo sapiens (Human).
Eukaryota; Metazoa; Cho
Mammalia; Eutheria; Pri
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01-JUN-2002
01-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cho J.M., Song D.J., Alaoui-Jamali M.A.;
"RBTI, a novel transcriptional co-activator,
of Replication Protein A.";
Nucleic Acids Res. 28:3478-3485(2000).
EMBL; AF192529; AAF05761.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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|LRRHYLIHNTLQQLQAALRLAPAPALPPEPL---
                                                                                                                                                            LCHMLVEPNLCRSVLIANTVRQIQEEMTQDGTWRTV-APQAAERAPLNRLVSTEILCRAA
                                                                                                                                                                                      HSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DIDTSAVEKE - - - PARAPPEP - PHNLFCAPGSWE - - - - - WNELDHIMEIILGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DIDTSMYDNELWAPASEGLKPGPED----GPGKEEAPELDEAELDYLMDVLVGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLKRKHSDLEEEE----ERWEWSPAGLQSYQQA-----LLRISLDKVQRSLGPRAPS
                                                                    WGQEGAHPAPGLGD-GHTQGPVSDLCPVTSAQAPRHLQSSAWEMDGPRENRGSFHKSLDQ
                                                                                                                                                                                                                                                        MFARGLKRKCVGHEEDVEGALAGLKTVSSY - - - - - - - -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L-SHIEGLSQAPQP-----LADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRHLVLVVNTLRRIQAS--MAPAAALPPVPSPPAAPSVADNLLASSDAALSASMASLLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
(TrEMBLrel.
  -ALDLLGPATGCLLDDGLEGLFEDIDTSMYD-NELWAPASEGLKPGPEDG
                                                                                                                                                                                                                                                                                                                                                                                                                                       241 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196 AA;
                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                                                 -ASLLEDLSHIEG------LSQAPQPLADEG----PPGRSIGGAAPSLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Chordata; ; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                         26112 MW;
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                                                                                                                                                                                                                                                                                                                                          Score 170; DB
Pred. No. 1.7e
38; Mismatches
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Last annotation update)
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Pred.
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Catarrhini;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       CC936EDEDA4B9A17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33433EF7F8A9EBA7
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..7e-05;
les 90;
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                                                                                                                                                                                                                                                                                                                                                                                       Length 241;
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                                                                                                                                                                                                                                                   -SLQRQSLLDMSLVKLQ
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RESULT
Q9CWM2
ID Q9CWM2
AC Q9
AC Q9
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Best Local S
Matches 73
                O9CWM2 PRELIMINARY; PRT; 237 AA.

O9CWM2; O99M6;
O1-JUN-2001 (TrEMBLrel. 17, Created)
O1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
O1-MAR-2003 (TrEMBLrel. 23, Last annotation update)
ES cells cDNA, RIKEN full-length enriched library, clone:2410018C03
product:hematopoietic progenitor protein, full insert sequence
(Hematopoietic progenitor protein).
2410018C03RIK OR HEPP.
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01-JUN-2001
01-JUN-2001
01-MAR-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

MEDLINE=21375891; PubMed=11482882;

Abdullah J.M., Jing X., Spassov D.S., Nachtman R.G., Jurecic l

Abdullah J.M., Jing X., Spassov D.S., Nachtman R.G., Jurecic l

Toloning and Characterization of Hepp, a Novel Gene Expressed

Preferentially in Hematopoletic Progenitors and Mature Blood of Preferentially in Hematopoletic Progenitors and Mature Blood Cells Mol. Dis. 27:667-676(2001).
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strausberg R.;
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27.7%;
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les 90;
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241;

62;

Gaps

13

217

164 153 105 114 46 54

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MEDLINE=20530913; PubMed=11076861;
Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,
Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,
Ronno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
Sumi N., Ishi Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.,
"RIKEN integrated sequence analysis (RISA) system-384-format
sequencing pipeline with 384 multicapillary sequencer.";
Genome Res. 10:1757-1771(2000).
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SEQUENCE FROM N.A.
STRAIN-C57BL/6J;
MEDLINE-21375891; PubMed-11482882;
Abdullah J.M., Jing X., Spassov D.S., Nachtman R
"Cloning and Characterization of Hepp, a Novel G
"referentially in Hematopoietic Progenitors and Blood Cells Mol. Dis. 27:667-676(2001).
EMBL; AK010535; BAB27012.2; -.
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MEDLINE=20499374; PubMed=11042159;
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STRAIN=C57BL/6J;
MEDLINE=99279253; PubMed=10349636;
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MEDLINE-21085660; PubMed
RIKEN FANTOM CONSORTIUM;
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Nature 420:563-573(2002).
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Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.,
"Normalization and subtraction of cap-trapper-selected
prepare full-length cDNA libraries for rapid discovery
Genome Res. 10:1617-1630(2000).
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	EEAPELDEAELD- : : GGAPEMTEQEIDA	GALDLLGPATGC : SAAELESSAEEC	SVR	ASS :	ngth 98 Indels	Glasgow nucleic		
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	CCXC	DDGI	ALSA : AVS-	VLKI	ଜୁ			
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RESULT 3
US-09-252-991A-27790
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; Patent No. 6551795
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: CERRONE, MICHAEL C.
REGISTRATION NUMBER: 39,132
REFERENCE/DOCKET NUMBER: PF-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/083,521
FILING DATE: Herewith
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LENGTH: 1317 amino acids
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ATTORNEY/AGENT INFORMATION:
NAME: CERRONE, MICHAEL C
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APPLICANT: Guegler, Karl J
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: PROSTA
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Local Similarity 23.7%;
les 58; Conservative 20
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                                                                                                                                                                                                                                                                                                                        SLGQEAPS-SEDEDTTEATSGYFTDLSSDGPHTEKSGIVPALRSLQKQVGTPDSLDSLDI
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                                                                                                                                                                                   EGESPGPDPLLSVSLGGLSKKSPYRDSAYFSDLDAESEPTFGPEKHSGIQDSQKEQDLRS 984
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Pred. No. 0.24;
0; Mismatches
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 27790
LENGTH: 760
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                  FILING DATE: 06-FEB-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/494
FILING DATE: 22-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Fraser, Janis K.
REGISTRATION NUMBER: 34,81
REFERENCE/DOCKET NUMBER: 0
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TYPE: PRT
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APPLICANT: Hsteh, Chung-Ming
APPLICANT INVENTION: A SINGLE
                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
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ADDRESSEE: Fish & Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: A SINGLÉ GENE ENCODING AORTIC-SPECIFIC TITLE OF INVENTION: AND STRIATED-SPECIFIC MUSCLE CELL ISOFO NUMBER OF SEQUENCES: 19
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                COMPUTER:
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                                                                                                                                                                                                                   APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Boston
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 14
                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14, Application US/09303069A Patent No. 6350592
                                                                                                                            Matches
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APPLICANT: Lee, Mu-En
APPLICANT: HSieh, Chung-Ming
APPLICANT: HSieh, Chung-Ming
APPLICANT: HSieh, Chung-Ming
APPLICANT: HSieh, Chung-Ming
APPLICANTION: SINGLE GENE ENCODING AORTIC-SPECIFIC AND STRIATED-SPECIFIC
TITLE OF INVENTION: MUSCLE CELL ISOFORMS AND USES THEREOF
FILLE REFERENCE: 05433/039001
CURRENT FILING INTER: 1999-04-30
CURRENT FILING DATE: 1999-04-30
EARLIER APPLICATION NUMBER: US 09/134,250
EARLIER FILING DATE: 1998-08-14
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                                                                                                                                                                                                                              TYPE: PRT
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LENGTH: 661 amino acid
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FRAGMENT TYPE:
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46 FDLSVLKLHHSLQQSEP----DLR---
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                                                                                    7 KRKREEEEEKEPLAVDSW-----
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                                                                                                                     Score 104; DB 4; Length 661; Pred. No. 0.18; ndels 1
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Pred. No. 0.18;
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US-09-134-250-14
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SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 14
LENGTH: 661
TYPE: PRT
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SINGLE GENE ENCODING AORTIC-SPECIFIC AND STRIATED-SPECIFIC TITLE OF INVENTION: MUSCLE CELL ISOFORMS AND USES THEREOF FILE REFERENCE: 05433/038001
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APPLICANT: Hsieh, Chung-Ming
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                                                                                  ----GKEEAPELDEAELDYLMDVLVGTQALERP 231
                                                                                                                                         VRRRDQFPLTRSRAIQ-----ECRSPVPPPAADPPEARTKAPPGRK---REPPAQAVR 338
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                                                                                                                   FLPWAT - - - - - PGLEG - - AAVPQTLEKNRAGPEAEKRLRRGPEEDGPWGPWDRRGARSQG
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Matches
                                                        SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 7257
TYPE: PRT
ORGANISM: Sorangium cellulosum
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Patent No. 6346404
GENERAL INFORMATION:
  Query Match
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LENGTH: 7257
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APPLICANT: Ligon, James
APPLICANT: Molnar, Istvau
APPLICANT: Zirkle, Ross
APPLICANT: Cyr, Devon
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APPLICANT: Zirkle, Ross
APPLICANT: Cyr, Devon
APPLICANT: Goerlach, Joern
TITLE OF INVENTION: GENES FOR THE BIOSYNTHESIS OF EPOTHILONES
FILE REFERENCE: 4-30582A
CURRENT APPLICATION NUMBER: US/09/335,409
CURRENT FILING DATE: 1999-06-17
NUMBER OF SEQ ID NOS: 30
CORMANDE: Detection Volume of Seq ID NOS: 30
CORMANDE: Detection Volume of Seq ID NOS: 30
                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/335,409
PRIOR FILING DATE: 1999-06-17
NUMBER OF SEQ ID NOS: 30
                                                                                                                                                                                                            APPLICANT: Cyr, Devon
APPLICANT: Goerlach, Joern
TITLE OF INVENTION: GENES FOR THE BIOSYNTHESIS
FILE REFERENCE: 4-30582A
CURRENT APPLICATION NUMBER: US/09/568,102
CURRENT FILING DATE: 2000-05-10
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Zirkle, Ross
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ilarity 24.2%;
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Pred. No. 5.1
  Score 103.5;
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; SEQ ID NO 5
; LENGTH: 7257
; TYPE: PRT
; ORGANISM: Soranglum cellulosum
US-09-567-969-5
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Best Local Similarity
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Matches 66; Conserv
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APPLICANT: Goerlach, Joern
TITLE OF INVENTION: GENES FOR THE BIOSYNTHESIS OF EPOTHILONES
FILE REFERENCE: 4-30.582A
CURRENT APPLICATION NUMBER: US/09/567,969
CURRENT FILING DATE: 2000-05-10
CURRENT FILING DATE: 2000-05-10
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24.2%; Pred. No. 5.
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SEQ ID NO 5
LENGTH: 7257
TYPE: PRT
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APPLICANT: Ligon, James
APPLICANT: Moinar, Istvan
APPLICANT: Zirkle, Ross
APPLICANT: Zirkle, Ross
APPLICANT: Cyr, Devon
APPLICANT: Goerlach, Joern
TITLE OF INVENTION: GENES FOR THE BIOSYNTHESIS
FILE REFERENCE: 4-3582A
                                                                         CURRENT APPLICATION NUMBER: US/09/568,486
CURRENT FILING DATE: 2000-05-10
PRIOR APPLICATION NUMBER: 09/335,409
PRIOR FILING DATE: 1999-06-17
NUMBER OF SEQ ID NOS: 30
                                                       SOFTWARE: PatentIn Ver.
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CURRENT FILING DATE: 2000-05-10
PRIOR APPLICATION NUMBER: 09/335,409
PRIOR FILING DATE: 1999-06-17
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APPLICANT: Goerlach, Joern
TITLE OF INVENTION: GENES FOR THE BIOSYNTHESIS OF EPOTHILONES
FILE REFERENCE: 4-30582A
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24.2%; Pred. No. 5.1;
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APPLICANT: Cyr, Devon
APPLICANT: Goerlach, Joern
APPLICANT: GOERION: GENES FOR THE BIOSYNTHESIS OF
TITLE OF INVENTION: WINDER: US/09/568,472
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SEQ ID NO 5
LENGTH: 7257
TYPE: PRT
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Patent No. 6358719
GENERAL INFORMATION:
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Best Local :
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PRIOR FILING DATE: 1999-06-17
NUMBER OF SEQ ID NOS: 30
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3545 KAVSSRGKLAFLFTGQGAQMPGMGRGLYETWPAFREAFDRCVALFDREIDQPLREVMWA- 3603
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                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                         LSAHLSAHPELSLGDVAFSLATTRSPMEHRLAIATTSREALRGALDAAAQQKTPQGAVRG
                                                                                                              LLEDLS-HIE-----GLSQAPQPL-----
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24.2%; Pred. No. 5.1;
ative 24; Mismatches
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                                                                                                                                                                                                                                                                                                       24; Mismatches
                                                                                                                                                                                                                                                                                                                          Pred.
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Pred. No. 5.1
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PEDGPGKEEAPELDEA-----ELDYLMDVL 222

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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ruvkun, Gary
APPLICANT: Kimura, Koutarou
APPLICANT: Patterson, Garth
APPLICANT: Ogg, Scott
APPLICANT: Paradis, Suzanne
APPLICANT: Tisenbaum, Heidi
APPLICANT: Morris, Jason
APPLICANT: Koweek, Allison
TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITION
FILE REFERENCE: 00786/351001
CURRENT APPLICATION NUMBER: US/08/857,076C
CURRENT FILING DATE: 1997-05-15
                                                                                                                                                                                                                                                                                                     RESULT 14
US-08-857-076-57
; Sequence 57, Applic
; Patent No. 6225120
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; SEO ID NO 5
; LENGTH: 7257
; TYPE: PRT
; ORGANISM: Sorangium cellulosum US-09-567-899-5
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US-09-567-899-5
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Patent No. 6383787
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Best Local Similarity
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APPLICANT: Goerlach, Joern
TITLE OR INVENTION: GENES FOR THE BIOSYNTHESIS OF EPOTHILONES
FILE REFERENCE: 4-30582A
CURRENT APPLICATION NUMBER: US/09/567,899
CURRENT FILING DATE: 2000-05-10
CURRENT FILING DATE: 2000-05-10
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APPLICANT: Ligon, James
APPLICANT: Molnar, Istva
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Zirkle, Ross
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24.2%; Pred. No. 5.1
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Search completed: August 19, 2003, 09:37:02 Job time : 32 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-345-473E-40
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 40
LENGTH: 1601
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APPLICANT: Hodge, Martin
TITLE OF INVENTION: No. 6558903el Kinases a
FILE REFERENCE: 35800/183781
CURRENT APPLICATION NUMBER: US/09/345,473E
CURRENT FILING DATE: 1999-06-30
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 57
LENGTH: 655
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Best Local
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ORGANISM: C. elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                          7 Match 8.3%; Score 100; DB 4;
Local Similarity 25.1%; Pred. No. 1.4;
nes 64; Conservative 29; Mismatches 92
                                                                             1244
                                                                                                                                                                                                                                                                                                     1076 PAPVQEPLVIDHHSDVLTQLDSELRKVSGVSHSASPSTVVESLT----SMTPQTIPLAC 1130
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Similarity 36.5%;
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                                                                                                                 DVLVGTQALERPPGP
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                                                                                                                                                                                                                                                                   EGPPGRSIGGAAPSLGALDLLG------PATGCLLD--DGLEGLFEDIDT------ 179
                                                                                                                                                                                                                                                                                                                                           PSPPAAPSVAD---NLLASSDAAL------SASMASLLEDLSHIEGLSQAPQ--PLAD 137
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Pred. No. 0.42;
9; Mismatches 44
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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Match
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:/cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
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:/cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
:/cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
:/cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
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:/cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
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                   15 US-10-106-698-4456
14 US-10-076-069-4
15 US-10-106-698-5516
14 US-10-076-069-5
10 US-09-764-846-139
10 US-09-764-846-139
10 US-09-912-917-2
15 US-10-157-031-415
15 US-10-260-715-8
15 US-10-260-715-8
16 US-09-963-896-7
17 US-10-076-069-6
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US-09-925-302-596
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Sequence 412, App
Sequence 596, App
Sequence 4456, Ap
Sequence 4, Appl1
Sequence 2, Appl1
Sequence 139, App
Sequence 139, App
Sequence 2, Appl1
Sequence 415, App
Sequence 415, App
Sequence 415, App
Sequence 6, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
Sequence 6, Appl1
Sequence 6, Appl1
Sequence 7, Appl1
Sequence 6, Appl1
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4.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
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US-10-156-761-11403	-10-1	-92	-10-156-76	-10-078-77	-10-21	US-09-862-027-80	US-09-841-132-190			-10-156-76	-10-156-7	-76	-10-211-96)-156	-10-205-032-1	-10-017-	-10-156	٠.		US-09-862-027-40		658	~	US-09-801-368-38	-10-060-036-		US-10-014-717-5	09-835-2	US-10-160-865-14
114	Sequence 50, Appl	5,	11646	194,	31,	e 80,	190,	\mathbf{r}	2, App	7944,	7652, A	1109	32, Ap	8940	10, Ap	2396, A	_	1	7, 2	e 40	57,	57, A	128		166,	961	io Ci	\sim	Sequence 14, Appl

ALIGNMENTS

US-09-731-872-412

GENERAL INFORMATION:

Sequence 412, Application US/09731872 Patent No. US20020102604A1

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PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR FILING DATE: 1999-12-08
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR FILING DATE: 2000-03-06
NUMBER OF SEQ ID NOS: 482
SOFTWARE: Patent.pm
SEQ ID NO 412
LENGTH: 236
TYPE: PRT
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Best Local Similarity
                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Bougueleret, Lydie
APPLICANT: Jobert, Severin
TITLE OF INVENTION: FULL-LENGTH HUMAN CDNAS ENCODING POTENTIALLY SECRETED PROTEINS
FILE REFERENCE: 78.USJ.REG
CURRENT APPLICATION NUMBER: US/09/731,872
CURRENT FILING DATE: 2000-12-07
121 DLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLLDDGLEGLFEDIDTS
                                                 _
                                                                                                                                     1 MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSVLKLHHSLQQS
                                                                                                                     MLSKGLKRKREEEEEKEPLAVDSWWLDPGHTAVAQAPPAVASSSLFDLSVLKLHHSLQQS
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Pred. No. 2.4e-93;
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Sequence 4456, Application US/10106698
Publication No. US20030109690A1
GENERAL INFORMATION:
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer As:
FILE REFERENCE: PA005P1
CURRENT APPLICATION UNMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
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LENGTH: 254
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
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CURRENT FILING DATE: 2001-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Ver.
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OTHER INFORMATION: Xaa
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     APPLICATION
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     NUMBER:
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27.7%;
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     60/163,280
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/10076069 Publication No. US20020177214A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
SOFTWARE: PatentIn Ver. 3.0
SEQ ID NO 4456
LENGTH: 254
TYPE: PRT
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Best Local S
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Best Local
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APPLICANT: NACHTMAN, RONALD
TITLE OF INVENTION: HEPP, A NOVEL GENE WITH A ROLE IN HEMATOPOIETIC AND NEURAL DEV
FILE REFERENCE: 39532-176599
CURRENT APPLICATION NUMBER: US/10/076,069
CURRENT FILING DATE: 2002-02-15
PRIOR APPLICATION NUMBER: US 60/268,923
PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: MISC_FEATURE LOCATION: (105)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino
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                     115
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M------ASLLEDLSHIEG-----LSQAPQPLADEG----PPGRSIGGAAPSLG- 153
                                                         LCHMLVEPNLCRSVLIANTVRQIQEEMTQDGTWRTV-APQAAERAPLDRLVSTEILCRAA
                                                                                           HSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSAS 114
                                                                                                                                     MFARGLKRKCVGHEEDVEGALAGLKTVSSY - - -
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                                                                                                                                                                                                           ; Score 165; DB 14;
; Pred. No. 3.9e-06;
39; Mismatches 90;
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Pred. No. 2.3e-06;
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US-10-106-698-5516
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                                                                                      Sequence 2, Application US/10076069
Publication No. US20020177214A1
GENERAL INFORMATION:
APPLICANT: JURECIC, ROLAND
APPLICANT: MACHTMAN, ROMALD
TITLE OF INVENTION: HEPP, A NOVEL GENE WITH
FILE REFERENCE: 39532-176599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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SOFTWARE: PatentIn Ver. 3.
SEQ ID NO 5516
LENGTH: 157
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GENERAL INFORMATION
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                   CURRENT APPLICATION NUMBER: US/10/076,01
CURRENT FILING DATE: 2002-02-15
PRIOR APPLICATION NUMBER: US 60/268,923
PRIOR FILING DATE: 2001-02-16
        NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/163,280 PRIOR FILING DATE: 1999-11-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/157,137 PRIOR FILING DATE: 1999-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide FILE REFERENCE: PA005P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ruben et al.
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OTHER INFORMATION: Xaa equals any
NAME/KEY: MISC_FEATURE
LOCATION: (132)
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                                                                                                                                                                                                                                                                                                                                                                                                                                            62 PDLRHLYLYVNTLRRIQAS--MAPAAALPPYPSPPAAPSVADNLLASSDAALSASMASLL
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        SEQ ID NOS:
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|| : | |||:::::|| |
PGPSSSCKSDLGELDHVVEILVET 241
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7; Mismatches
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; Sequence 139, A
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                                                                                                  Query Match
Best Local S
Matches 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Ver. SEQ ID NO 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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OTHER INFORMATION: XAA 6
NAME/KEY: SITE
LOCATION: (18)
OTHER INFORMATION: XAA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/764,846
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prior application data removed NUMBER OF SEQ ID NOS: 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: PTZ12
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TYPE: PRT
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OTHER INFORMATION:
                                                                                                                                                                                                                      NAME/KEY: SITE
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                                   21 PGPGAEASALPGDGATRGXGGGLYSAKAPNFMWRICV--
                                                                                                      68;
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LRR--IQASMAPAAALPPVPSPPAAPSVADNLLASSDAA-LSASMASLLEDLSHIEGLSQ 130
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Pred. No. 4.7e-05;
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Pred. No. 0.065;
7; Mismatches
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US-10-091-483-139
; Sequence 139, Application US/10091483
; Publication No. US20030049650A1
; GENERAL INFORMATION:
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CURRENT FILING DATE: 2002-03-07
NUMBER OF SEQ ID NOS: 348
Prior Application removed - See File Wrapper or Palm SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 139
LENGTH: 255
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
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TITLE OF INVENTION: Nucleic Acids, Proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: (19)
OTHER INFORMATION: xaa equals
NAME/KEY: misc_feature
LOCATION: (39)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)
OTHER INFORMATION: Xaa
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OTHER INFORMATION: Xaa equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                   Local Similarity
 232
                                                                   177
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                               221 VLVG--TOALERPPGP 234
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                                                                                                                                                                                                                               74 LRR--IQASMAPAAALPPVPSPPAAPSVADNLLASSDAA-LSASMASLLEDLSHIEGLSQ
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VLLGLPSAVLDRPPLP
                                                                ----ARLDREMHITDAEGLGLGPRLQEESFGFGSPLLGPIQLTLPLLLFEGCNEPRVQD
                                                                                                 EDIDTSMYDNELWAPASEGLKPGP---ED--
                                                                                                                                                                 APQPLADEGPPGRSIGGAAP------SLGALD-LLGPATGCL---LDDGLEGLF 174
                                                                                                                                                                                                                                                                  PGPGAEASALPGDGATRGXGGGLYSAKAPNFMWRICV-----RRKLSLNFLLLPINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APQPLADEGPPGRSIGGAAP------SLGALD-LLGPATGCL---LDDGLEGLF 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRGDFGAGQRPG----PLPGAPAASALVDHLQVQDDAVPLGLPRLHLAVDDAH-----
                                                                                                                                ----RLREGRNGRAQSGAAPLRVRAGQGTAGHTVAAADVLLEPVHGCAGVQLGRGGTG--
                                                                                                                                                                                                   VPRGDFGAGQRPG----PLPGAPAASALVDHLQVQDDAVPLGLPRLHLAVDDAH-----
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                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                 9.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equals any of the naturally occurring L-amino acids
 247
                                                                                                                                                                                                                                                                                                                                  ; Score 115; DB 15;
; Pred. No. 0.065;
27; Mismatches 83;
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                                                                                               -GPGKEEAPEL - - DEAELDYLMD
                                                                                                                                                                                                                                                                                                                                                                 Length 255;
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                                                                                                                                                                                                                                                                                                                                  78;
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RESULT 10
US-10-157-031-415
US-10-157-031-415
; Sequence 415, Application US/10157031
; Publication No. US20030108890A1
; GENERAL INFORMATION:
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                                          US-10-157-031-415
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                                                      SOPTWARE: PatentIn version 3.1
SEQ ID NO 415
LENGTH: 715
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 2
LENGTH: 983
    Query Match
                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
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Best Local
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                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/157,031
CURRENT FILING DATE: 2002-05-30
NUMBER OF SEQ ID NOS: 415
                                                                                                                                                                                                                  APPLICANT: Lobashev, A. V.
APPLICANT: Krukovskaya, L. L.
TITLE OF INVENTION: In silico screening for phenotype-associated expressed
FILE REFERENCE: 2760-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: LaThangue, Nicholas B
APPLICANT: Shikama, No. US20020028487Aliko
APPLICANT: The University Court of the University of Glasgow
TITLE OF INVENTION: JMY, a co-activator for p300/CBP, nucleic
TITLE OF INVENTION: JMY and uses thereof
FILE REFERENCE: AHB/LP5731500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/912,917
CURRENT FILLING DATE: 2001-07-25
PRIOR APPLICATION NUMBER: 09/311,236
PRIOR FILING DATE: 1999-05-13
                                                                                                                                                                                                                                                                                                                              APPLICANT: Baranova, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: GB 9818235.5 PRIOR FILING DATE: 1998-08-20 NUMBER OF SEQ ID NOS: 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADNLLASSDAALSASMA 116
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                                                                                                                                                                                                                                                                                            Yankovsky, N. K. Kozlov, A. P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.3%; Score 113; DB 9; Length 983; 25.1%; Pred. No. 0.53; ative 26; Mismatches 84; Indels
  9.3%;
    Score
  112;
  DВ
  15;
Length
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US-10-156-761-12958

Sequence 12958, Application US/10156761

Publication No. US20030119018A1

GENERAL INFORMATION:
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; ORGANISM: Homo sapiens
US-10-260-715-8
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US-10-260-715-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: GU, Jessie
TITLE OF INVENTION: Genes Associated with Mast Cell Activation
FILE REFERENCE: 053529-5006
CURRENT APPLICATION NUMBER: US/10/260,715
CURRENT FILING DATE: 2002-10-01
PRIOR APPLICATION NUMBER: 60/325,536
PRIOR APPLICATION NUMBER: 60/325,536
PRIOR FILING DATE: 2001-10-01
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PatentIn version 3.1
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/10260715 Publication No. US20030099992A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 26.0%; Matches 58; Conservative
  APPLICANT: OMURA, SATOSHI APPLICANT: IKEDA, HARUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: UCB, S.A.
APPLICANT: NOCKA, Karl
APPLICANT: LU, Sun
APPLICANT: MEDLEY, Qui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1259
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                                                                                                                                                                                                                                                                                                                                                                                                                      615 ASPAPAPTSAPTPTPAASPAPADGSKPQESVALPRRYQEGQVSASWGNLIAMVLRSHPFP
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                                                                                                                                                                                     778 PGP 780
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                                                                                                                                                                                                                                                                  733 SETNG---
                                                                                                                                                                                                                                                                                                                                                                128 LSQAPQPLADEGPPGRSIG------GAAPSLGALDLLGPATGCLLDDGLEGLFED 176
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362 PG-----APSMAGTVAPGGVSGPSPAQLGAPAL 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 LSHIEGL------SQAPQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGL 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243 QPVPLPPAAPSGATLSAAPQQPLPPVPPQYQVPGNLSAAQVAAQNAVEAAKNQKAGLGPR 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                79 ASMAPAAALPPVPSPPAAPSVADNLLASSDAAL-----SASMASLLEDL--SHIEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 PPVPSPPAAPS----SMASLLED 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36 APPAVASSSLFDLSVLKLHHSLQQSEP-----DLRHLVLVVNTLRRI--QASMAPAAAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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MEDLEY, Quintus
THOMIS, Daniel
                                                                                                                                                                                                                                                                                                   IDTSMYDNELWAPASEGLKPGPEDGPG-KEEAPELDEAELDYLMDVLV----GTQALERP 231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.1%; Score 110; DB 15;
26.2%; Pred. No. 1.3;
vative 20; Mismatches 71;
                                                                                                                                                                                                                                                              -SPSPDPPPGLRGEGTR--EKSLDPLPQAAMPRGPAQPPAQRP
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8; Mismatches
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US-09-963-896-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 49; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7, Application US/09963896 Patent No. US20020102585A1 GENERAL INFORMATION:
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LENGTH: 803
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APPLICANT:
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CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR PPLICATION NUMBER: JP 2001-272697
PRIOR PPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
                                                                                                                COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/963,896
FILING DATE: 26-Sep-2001
CLASSIFICATION: CUnknown>
                                 APPLICATION NUMBER: 09/397,558
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS,
STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Guegler, Karl J.
Corley, Neil C.
TITLE OF INVENTION: PROSTATE GROWTH-ASSOCIATED MEMBRANE PROTEINS
                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Lal, Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 492 VPPTASPTASPTASPASPAVGN---ASTEAPSAGRAEPLASGVPERAGAGERP-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82 APAAALP---PVPSPPAAPSVADNLLASSDAALSASMASLLEDLSHIEGLSQAPQPLADE 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28 PGHAAVAQ-----AP-PAVASSSLFDLSVLKLHHSLQQSEPDLRHLVLVVNTLRRIQASM
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                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                         STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                              CITY: PALO ALTO
REGISTRATION NUMBER: 39,132
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HORIKAWA, HIROSHI
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                CERRONE,
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Pred. No. 0.97;
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US-10-076-069-6
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; ORGANISM: Mus
US-10-076-069-6
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publication No. US20020177214A1
GENERAL INFORMATION:
APPLICANT: JURECIC, ROLAND
APPLICANT: NACHTMAN, RONALD
TITLE OF INVENTION: HEPP, A NOVEL GENE WITH A ROLE IN HEMATOPOIETIC AND NEURAL DEVEL
FILE REFERENCE: 39532-176599
                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.0 SEQ ID NO 6
                                                                                                                                 Matches
                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/076,069
CURRENT FILING DATE: 2002-02-15
                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
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INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1317 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                              LENGTH: 113
                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 8.8%;
Local Similarity 23.7%;
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TELEPHONE: (650) 855-0555
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                                                                               1 MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSSLFDLSYLKLHHSLQQS
                                EPDLRHLVLVVNTLRRIQASMA 82
                                                                MFARGLKRKYGDQEE----GVEGFGTVPSYSLQRQ-----SLLDMSLVKLQLCHMLV 48
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EPNLCRSVLIANTVRQIQEEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPSPG 989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LIBRARY: GenBank CLONE: 2459993
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                                                                                                                               Conservative
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                                                                                                                            ; Score 104; DB;
; Pred. No. 0.19;
16; Mismatches
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70
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                                                                                                                                                              Length 113;
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Search completed: August 19, 2003, 09:44:59 Job time: 58 secs
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LOCATION: (345)
OTHER INFORMATION:
US-09-789-561-97
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US-09-789-561-97
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GENERAL INFORMATION:
APPLICANT: Ni et al
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CURRENT FILING DATE: 2001-02-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1999-PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PC'
PRIOR FILING DATE: 2000-08-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 459
                                                                                                                                                                                                                                                                                                                                Local
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                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                          WAPASEGIKPGPEDGPGKEEAPELDEAELDYLMDVLVGTQALERPPGP 234
                                                                                                                                                     GLSQAPQPLADEGPPGRSIGGAAPSLGALDLLGPATGCLLDDGLEGLFEDIDTSMYDNEL 186
                                                                                                                                                                                                                    --VVNTLRRIQASMAPAAAL-PPVPSPPAAPSVADNLLASSDAALSASMASLLEDLSHIE 126
                                                          --PMGMRGPPGPQGPPG---SPGRAGA-
                                                                                                                         G----PPPA--QGSPGD--GGLQDQVGAWGLPGP-TGPKGDAGSRG-----
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S: 194
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                                                                                                                                                                                                                                                                                                                               Score 104; DB Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                              DB 9; Length 459
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                                                              VGTPGERGPPGP
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Database
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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              1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
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13: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
16: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
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/cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Sequence 1, Appli Sequence 358, App	Sequence 153, App Sequence 179, App	Sequence 167, App Sequence 167, App	Sequence 773, App Sequence 167, App	Sequence 1, Appli Sequence 3, Appli	Sequence 520, App Sequence 2641, Ap	Sequence 5565, Ap	Sequence 171, App Sequence 171, App	Description

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ALIGNMENTS

RESULT 1 US-09-731-872-171

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NUMBER OF SEQ ID NOS: 482
SOFTWARE: Patent.pm
SEQ ID NO 171
LENCTH: 1219
TYPE: DNA
ORGANISM: Homo sapiens
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US-09-731-872-171
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                                                                                                                            Query Match
Best Local Similarity 99.8
Matches 1190; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Bougueleret, Lydie
APPLICANT: Jobert, Severin
TITLE OF INVENTION: FULL-LENGTH HUMAN CDNAS ENCODING POTENTIALLY SECRETED PROTEINS
FILE REFERENCE: 78.US3.REG
CURRENT APPLICATION NUMBER: US/09/731,872
CURRENT FILING DATE: 2000-12-07
CURRENT FILING DATE: 2000-12-07
                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR FILING DATE: 1999-12-08
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR FILING DATE: 2000-03-06
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Pred. No. 0;
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Sequence 171, Application US/09876997
Sequence 171, Application US/09876997
Publication No. US20030152921A1
GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, Jean Baptist
APPLICANT: Bougueleret, Lydie
APPLICANT: Bougueleret, Lydie
APPLICANT: Jobert, Severin
TITLE OF INVENTION: FULL-LENGTH HUMAN cDNAS
FILE REFERENCE: 78.US4.CIP
CURRENT APPLICATION NUMBER: US/09/876,997
CURRENT FILING DATE: 2001-06-08
PRIOR APPLICATION NUMBER: US 09/731,872
PRIOR FILING DATE: 2000-12-07
PRIOR FILING DATE: 2000-03-06
PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR FILING DATE: 1999-12-08
NUMBER OF SEQ ID NOS: 482
SOSFWARE: Patent.pm
SEQ ID NO 171
FUNCTH: 1219
TYDE: DNA
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Similarity 99.8%;
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CURRENT APPLICATION NUMBER: US/09/796,692
CURRENT FILING DATE: 2001-03-01
PRIOR APPLICATION NUMBER: 60/186,126
PRIOR FILING DATE: 2000-03-01
PRIOR PPLICATION NUMBER: 60/190,479
PRIOR PPLICATION NUMBER: 60/200,545
PRIOR PPLICATION NUMBER: 60/200,303
PRIOR FILING DATE: 2000-04-27
PRIOR APPLICATION NUMBER: 60/200,303
PRIOR APPLICATION NUMBER: 60/200,303
PRIOR PPLICATION NUMBER: 60/200,779
PRIOR APPLICATION NUMBER: 60/200,779
PRIOR APPLICATION NUMBER: 60/200,799
PRIOR PRIOR PRIOR PRIOR NUMBER: 60/200,999
PRIOR PILING DATE: 2000-05-01
PRIOR APPLICATION NUMBER: 60/2020,084
PRIOR PRILING DATE: 2000-05-04
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5565, Application US/09796692 Publication No. US20020198362A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Gaiger, Alexander
APPLICANT: Algate, Paul A.
APPLICANT: Mannion, Jane
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DETECTION, DIAGNOSIS AND
TITLE OF INVENTION: HEMATOLOGICAL MALIGNANCIES
TILE REFERENCE: 2077.001200
       APPLICATION NUMBER: 60/218,950 FILING DATE: 2000-07-14 APPLICATION NUMBER: 60/222,903
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; TYPE: DNA
; ORGANISM: Homo :
US-09-796-692-5565
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                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Gaiger, Alexander
APPLICANT: Algate, Paul A.
APPLICANT: Mannion, Jane
APPLICANT: Retter, Marc
APPLICANT: Retter, Marc
APPLICANT: Corixa Corporation
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Hematological Malignancies
FILE REFERENCE: 014058-013520US
CURRENT APPLICATION NUMBER: US/10/040,862
CURRENT FILING DATE: 2001-11-06
PRIOR FILING DATE: 2000-03-01
PRIOR PELICATION NUMBER: US 60/190,479
PRIOR PELICATION NUMBER: US 60/190,479
PRIOR FILING DATE: 2000-03-17
PRIOR PELICATION NUMBER: US 60/200,545
PRIOR PELICATION NUMBER: US 60/200,545
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR FILING DATE: 2000-04-28
PRIOR PELICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR PELICATION NUMBER: US 60/200,999
PRIOR PELICATION NUMBER: US 60/200,999
PRIOR PELICATION NUMBER: US 60/202,084
PRIOR PELICATION NUMBER: US 60/202,084
PRIOR APPLICATION NUMBER: US 60/202,084
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR APPLICATION NUMBER: US 60/222,903
PRIOR FILING DATE: 2000-05-04
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US-10-040-862-5565/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 258; Conserv
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APPLICANT: Friedrich, Glenn
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: NO. US20020102543A1el Mutated Mammalian Cells and
FILE REFERENCE: LEX-0102-USA
CURRENT APPLICATION NUMBER: US/09/728,445
CURRENT FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/168,358
PRIOR APPLICATION NUMBER: US 60/168,358
PRIOR APPLICATION SERVICE TO SERVICE 
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US-09-728-445-520
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SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 5565
LENGTH: 258
TYPE: DNA
                                                                                                                                                                                                                                          Matches 137; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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PRIOR ETLING DATE: 2000-08-04
PRIOR APPLICATION NUMBER: US 60/223,378
PRIOR FILING DATE: 2000-08-07
PRIOR APPLICATION NUMBER: US 09/796,692
PRIOR FILING DATE: 2001-03-01
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GGGGGGATCTCACCCAACCTGGGTGCCTTGGACTTGCTAGGCCCAGCCACTGGCTGTCTG 120
                                                                                                                  GAGGACCTGAACCAGGCCCCCAACCCCAAGCAGATGAGGGGCCCTCCAGGCCGCTCCATC
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                                                                                                                                                                                                                                    Score 120.8; DB 10;
Pred. No. 1.2e-25;
0; Mismatches 27;
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RESULT 7
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; NAME/KEY: CDS
; LOCATION: (1)..(1227)
US-10-156-761-2641
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US-10-156-761-2641/c
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TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR TILING DATE: 2001-05-30
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
PRIOR FILING DATE: 2001-08-02
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SEQ ID NO 2641
LENGTH: 1227
TYPE: DNA
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Best Local Similarity 45.38;
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                                                                                                                          GGCGCTGAGCC 853
                                                                                                                                                                  TCGGCGCCCTCCTCGATGCCCTTCGACGCGTCGAAGGCGATCGACGCCGGGTCGCCG
                                                                                                                                                                                                       TGGACTACCTCATGGATGTGCTGGTGGGCACACACGCCACTGGAGCGACCGCCGGGGCCAG
                                                                                                                                                                                                                                            AGCTCGTCCATGAGCCCGGTCTTGGTGTGCAGCCGCCCCCGCGGTGTCGATGAGGACGACG 879
                                                                                                                                                                                                                                                                                  AACCAGGCCCTGAGGATGGGCCGGGCAAGGAGGAAGCTCCGGAGCTGGACGAGGCCGAAT 782
                                                                                                                                                                                                                                                                                                                         AGGACGAGCAGTACCTCGTCGAGCGGGGCGTGCTTCTCGACGACGCGCTTGACCTTGCCC 939
                                                                                                                                                                                                                                                                                                                                                              AGGATATTGACACCTCTATGTATGACAATGAACTTTGGGCACCAGCCTCTGAGGGCCTCA 722
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGATGACGATGCCGCCCTTGGCGGTGCCGTCCAGCTTGGTGAGCACGATGCCGGTGATA 1059
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SAKAKI, YOSHIYUKI
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HORIKAWA, HIROSHI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1227;
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; Sequence 1, Application US/10156761
; Publication No. US20030119018A1

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; ORGANISM: Streptomyces avermitilis
FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (4187715)
; OTHER INFORMATION: a, t, c, g, oth
US-10-156-761-1
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APPLICANT: SARAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
                                                                   Sequence 3, Application US/10076069
Publication No. US20020177214A1
GENERAL INFORMATION:
APPLICANT: JURECIC, ROLAND
APPLICANT: NACHTMAN, RONALD
TITLE OF INVENTION: HEPP, A NOVEL GENE WITH
FILE REFERENCE: 39532-176599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 168;
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APPLICANT: ISHIKAWI
APPLICANT: HORIKAWI
APPLICANT: SHIBA, T
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CURRENT APPLICATION NUMBER: US/10/076,069
CURRENT FILING DATE: 2002-02-15
PRIOR APPLICATION NUMBER: US 60/268,923
PRIOR FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: OMURA, SATOSHI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
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                                                                                                                                                                                                                                                                                     CCCTCGGGTCC
                                                                                                                                                                                                                                                                                                                           GGCGCTGAGCC 853
                                                                                                                                                                                                                                                                                                                                                             TCGGCGCCCTCCTCGATGCCCTCCTTGACGGCGTCGAAGGCGATCGACGCCGGGTCGCCG
                                                                                                                                                                                                                                                                                                                                                                                               TGGACTACCTCATGGATGTGCTGGTGGGCACACACGCCACTGGAGCGACCGCCGGGGCCAG 842
                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCGTCCATGAGCCCGGGTCTTGGTGTGCAGCCGCCGCGGTGTCGATGAGGACGACG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGATGACGATGCCGCCCTTGGCGGTGCCGTCCAGCTTGGTGAGCACGATGCCGGTGATA 3253487
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HORIKAWA, HIROSHI
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Pred. No. 0.028;
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                                                                                           ROLE
                                                                                           IN HEMATOPOIETIC AND NEURAL DEVEL
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; NAME/KEY: CDS
; LOCATION: (73)..(798)
US-10-037-270-773
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; LOCATION: (75)..(797)
US-10-076-069-3
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                                                                                                             SOFTWARE: pt_FL_genes Version 1.0
SEQ ID NO 773
LENGTH: 2629
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SOFTWARE: PatentIn version
SEQ ID NO 3
LENGTH: 2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Publication No. US20 GENERAL INFORMATION:
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Best Local
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APPLICANT:
APPLICANT:
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APPLICANT:
                                                                                                                                                                                     APPLICANT: Drmanac, Radoje T.

TITLE OF INVENTION: NO. US20030104529Alel Nucleic Acids and TITLE OF INVENTION: Polypeptides

FILE REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: US/10/037,270
CURRENT APPLICATION NUMBER: US/10/037,270
CURRENT FILING DATE: 2002-01-04
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR PILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
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APPLICANT: Liu, Chenghua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo:
FEATURE:
                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
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                                                                                         TYPE: DNA
                                                       ORGANISM: Homo FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269 TCCCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGCAGAGTGAGCCGGAC
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Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
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                                                                                                                                                                                                                                                                                                                                                                               Wang, Dunrui
Wang, Zhiwei
Tillinghast, John
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ren, Feiyan
Chen, Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhou, Ping
Ma, Yunging
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Zhang, Jie
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Pred. No. 0.0072;
0; Mismatches 104;
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APPLICANT: Stolk, John A.

APPLICANT: Algate, Paul A.

APPLICANT: Algate, Paul A.

APPLICANT: Fling, Steven P.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: THERAPY AND DIAGNOSIS OF OVARIAN CI
FILE REFERENCE: 210121.484C5

CURRENT APPLICATION NUMBER: US/09/825,294

CURRENT FILING DATE: 2001-04-03

NUMBER OF SEQ ID NOS: 215

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 167

LENGTH: 396
                                                                                                                 RESULT 11
US-09-970-966-167
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US-09-825-294-167
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Sequence 167, Application US/09970966
PATENT NO. US20020173638A1
GENERAL INFORMATION:
APPLICANT: Stolk, John A.
APPLICANT: Molesh, David Alan
APPLICANT: Fling, Steven P.
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Best Local S
Matches 106
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Best Local Similarity 50.7
Matches 107; Conservative
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106; Conserv
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Pred. No. 0.0077;
0; Mismatches 10
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NUMBER OF SEQ ID NOS: 288
SOFTWARE: FastSEQ for Windows Version 4...
SEQ ID NO 167
LENGTH: 396
TYPE: DNA
ORGANISM: Homo sapiens
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US-10-212-677-167
"~""ence 167, Application
"~" US2003012"
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TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.484C6
CURRENT APPLICATION UNMBER: US/09/970,966
CURRENT FILING DATE: 2001-10-02
NUMBER OF SEQ ID NOS: 215
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 167
SEQ ID NO 167
TYPE: DNA
ORGANISM: Homo sapiens
US-09-970-966-167
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                                                                                                                                                                                                                                        Query Match 3.6%;
Best Local Similarity 50.2%;
Matches 106; Conservative
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Best Local Similarity 50.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: HarÍocker, Šusan L.
APPLICANT: MCNEIll, PATLICIA D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
FITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILLE REFERENCE: 210121.484C7
CURRENT APPLICATION NUMBER: US/10/212,677
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Chenault, Ruth A. APPLICANT: Xu, Jiangchun APPLICANT: Fanger, Gary R.
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    293
                                     389 GCGGCTGCCCTGCCACCTGTGCCTAGCCCACCTGCAGCCCCCAGTGTGGCTGACAACTTA 448
                                                                                                           329 CTGCGGCACCTGGTGGTCGTGAACACTCTGCGGCGCATCCAGGCGTCCATGGCACCC 388
                                                                                                                                                           173 TCGCTCCTGGACATGTCTCTGGTGAAGTTGCAGCTTTGCCACATGCTTGTGGAGCCCAAT 232
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  GATGGGACGTGGCACAGTGGCACCCCAGGCTGCAGAGCGGGCGCCGCTCGACCGCTTG
                                                                            CTGTGCCGCTCAGTCCTCATTGCCAACACGCGTCCGGCAGATCCAAGAGGAGATGACGCAG
                                                                                                                                                                                                   TCCCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGCAGAGTGAGCCGGAC 328
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                                                                                                                                                                                                                                        Score 43; DB 15;
Pred. No. 0.013;
0; Mismatches 105
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                                                                                                                                                                                                                                                                                 Length 396
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US-10-106-698-179

Sequence 179, Application US/10106698

Publication No. US20030109690A1

GENERAL INFORMATION:
APPLICANT: Ruben et al.
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide;
FILE REFERENCE: PA005P1
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NAME/KEY: misc feature
LOCATION: (1490)
OTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: misc feature
LOCATION: (1508)
OTHER INFORMATION: n equals a,t,g, or c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 3.6%;
Best Local Similarity 50.2%;
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SEQ ID NO 153
LENGTH: 2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/925,302
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: n equals
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature LOCATION: (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature LOCATION: (1979)
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                                                                                                                                                                                                                                      449
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                                                                                                                                                                                                                                                                        GATGGGACGTGGCACAGTGGCACCCCAGGCTGCAGAGCGGCGCCGCTTCGACCGCTTG
                                                                                                                                                                                                                                                                                                             GCGGCTGCCCTGCCACCTGTGCCTAGCCCACCTGCAGCCCCCAGTGTGGCTGACAACTTA 448
                                                                                                                                                                                                                                                                                                                                                     CTGTGCCGCTCAGTCCTCATTGCCAACACGGTCCGGCAGATCCAAGAGGAGATGACGCAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 43; DB 9; Length 2038; Pred. No. 0.021;
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; LOCATION: (2010).. (2010)
; OTHER INFORMATION: n equals a,t,g,
US-10-106-698-179
                                                                                                                                                                                                                                                                                                                                                   US-10-156-761-1/c
                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/10156761 Publication No. US20030119018A1
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Best Local
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LOCATION: (1979)..(1979)
OTHER INFORMATION: n equals a
NAME/KEY: misc_feature
LOCATION: (1992)..(1992)
OTHER INFORMATION: n equals a
                    PRIOR
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APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIR
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ORGANISM: Homo sapiens
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LOCATION: (1508)..(1508)
OTHER INFORMATION: n equals
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Local Similarity 50.2%;
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HORIKAWA, HIROSHI
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PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
SOFTWARE: Patentin Ver. 3.0
SEQ ID NO 179
                                                 APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR FILING DATE: 2001-05-30
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CURRENT FILING DATE: 2002-03-27
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OTHER INFORMATION: n equals a,t,g, or
APPLICATION NUMBER: JP 2001-272697 FILING DATE: 2001-08-02
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Pred. No. 0.021;
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; SEQ ID NO 1
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; TYPE: DNA
; ORGANISM: Streptomyces avermitilis
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (4187715)
; OTHER INFORMATION: a, t, c, g, other or unknown
US-10-156-761-1
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Search completed: August 25, 2003, 16:56:32 Job time: 334 secs
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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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11776.803 Million cell updates/sec
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Copyright (c) 1993 - 2003 Compugen Ltd.
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	AI342377 qt27e08.x BE898853 60.1682146 BQ771685 UI-H-EZ1- BM843483 K-EST0121 AK002324 Mus muscu CD368900 UI-H-FT1- BE032665 601453004	BM9/3302 UI-CF-EC1 BE613164 601452139 AK004022 Mus muscu CA420820 UI-H-FG0- CA43158 UI-H-FG1- AK008303 Mus muscu CB851800 UI-CF-FN0 CB250543 UI-CF-FN0	02912 02912 38362 38362 57431 57131 57131 590528 908763 904777 904777 904777 904777	BU539198 AGENCOURT BG715050 602673273 BQ433568 AGENCOURT BQ878247 AGENCOURT BU537987 AGENCOURT BG468137 602509712

ALIGNMENTS

	REFERENCE AUTHORS TITLE JOURNAL COMMENT	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 1 BM923629 LOCUS DEFINITION
Email: cgapbs-r@mail.nih.gov Tissue Procurement: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM12804 row: j column: 01 High quality sequence stop: 699.	Mammalla; Eutheria; Primates; Catarrhin1; Hominidae; Homo. 1 (bases 1 to 1023) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished Contact: Robert Strausberg, Ph.D.	or, maka sequence. BM923629 BM923629.1 GI:19374008 EST. Homo sapiens (human) Homo sapiens Fukarvota: Metazoa: Chordata: Cramiata: Vertebrata: Futeleogtomi.	BM923629 1023 bp mRNA linear EST 12-MAR-2002 AGENCOURT_6623809 NIH_MGC_116 Homo sapiens cDNA clone IMAGE:5759328

Result No.

SUMMARIES

856.6 798.8 786.6 781.4

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BM923629 AGENCOURT BU856974 AGENCOURT BM558458 AGENCOURT BX101521 BX101521

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Matches 904;
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                                                                         AGCCACTGGCTGTCTACTGGACGATGGGCCTTGAGGGCCTGTTTGAGGATATTGACACCTC
                                                                                                                     TGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGGA 498
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TATGTATGACAATGAACTTTGNGCACCAGCCTCTGAGGGCCTCAAACCANGCCCTGAGGG
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/organism="Homo sapiens"
/mol_type="mrNA"
/db_xref="taxon:9606"
/clone="IMAGE:5759328"
/lab_host="DH1DB"
/clone=lib="NIH_MGC_116"
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                                                                                                              11 Similarity
817; Conser
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Conporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2886 row: b column: 22
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Tissue Procurement: ATCC
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1. (bases 1 to 908)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
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National Institutes of Health, M
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//db_xref="taxon:9606"
//clone="IMAGE:6646774"
//tissue_type="adenocarcinoma, cell line"
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AGENCOURT_6559395 NIH_MGC_88
5', mRNA sequence.
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BM558458.1 GI:18801220
                                                                  Eukaryota; Metazoa; Chordata; Craniata; V. Mammalla; Eutheria; Primates; Catarrhini; 1 (bases 1 to 1062)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian (
               Contact: Robert Strausberg, I
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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http://image.llnl.gov
Plate: LLAM12757 row: j
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Site_1: NotI; Site_2: SalI; Cloned unidirectionally;
Site_1: NotI; Site_2: SalI; Cloned unidirectionally;
Site_1: NotI; Site_2: SalI; Cloned and constructed by Life
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
a 325 c 339 g 190 t 4 others
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/mol_type="mRNA"
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                                                                                                                                                          www.rzpd.de
This clone is available royalty-free from RZPD;
Contact RZPD (clone@rzpd.de) for further information.
u13r Primer sequence: TTTCACACAGGAAACAGCTATGAC.
                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 797)
Ebert, L., Heil, O., Hennig, S., Neubert, P., Partsch, E. Radelof, U., Schneider, D. and Korn, B. Human UnigeneSet - RZPD3
                                                                                                                                                                                                                                bin/showLib.pl.cgi/response?libNo=972 Contact: Ina Rolfs RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH Heubnerweg 6, D-14059 Berlin, Germany Tel: +49 30 32639 101 Fax: +49 30 32639 111
                                                                                                                                                                                                                                                                                                                 RZPD Deutsches Ressourcenzentrum fuer Genomforschung
Im Neuenhelmer Feld 580, D-69120 Heidelberg, Germany
RZPD; IMAGP9980111859.
RZPDLIB; I.M.A.G.E. CDNA Clone Collection;
Human UnigeneSet - RZPD3 (RZPDLIB NO.972)
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          /tissue_type="ovarian tumor"
/lab_host="DH10B (ampicillin resistant)"
/clone_lib="Soares ovary tumor NbHOT"
/note="Organ: ovary; Vector: pT7T3D /Phan
                                                                                                                                                                                                                                                                                                                                                                                          Ina Rolfs
 modified
                                                                     /sex="Female"
                                                                                   /clone="IMAGp9980111859;
                                                                                                  /db_xref="taxon:9606"
                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
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AGGCGTCCATGGCACCCGCGGCTGCCCTGCCACCTGTGCCTAGCCCACCTGCAGCCCCA
                                                   AGGGGCCACCAGGCCGTAGCATCGGGGGGAGCAGCCCCAGCCTGGGTGCCTTGGACCTGC
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1; d by 0; sity 60 60 60 614 734 734 794							of 1.5%; Score 756.4; DB 13; Length 766; Similarity 99.9%; Pred. No. 1.2e-166; Conservative 0; Mismatches 1; Indels 0; Gaps	/clone="IMAGE:6569886" /tissue_type="adenocarcinoma, cell line" /lab_host="pHIDB (phage-resistant)" /clone_lib="NHH_MGC_107" /clone_lib="NhH MGC_107" /clone_lib="NhH MGC_1	Plate: LLCM2757 row: o column: 06 High quality sequence stop: 705. Location/Qualifiers 1. 766 /organism="Homo sapiens" /mol_type="mRNA" /db xref="taxon:9606"	VIL)	Mammalian Gene Collection	s (human) Is Metazoa; Chordata; Craniata; Vertebrata; E Nutheria; Primates; Catarrhini; Hominidae;	0215071 NIH_MGC_107 Homo sapiens cDNA clc 186 5', mRNA sequence. GI:22849639	766 bp mRNA

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National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10679 row: b column: 20
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4795699"
/tissue_type="hypothalamus"
/lab_host="DH10B"
                                                   /clone_lib="NIH_MGC_96"
/note="Organ: brain; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHI; Site_2: SalI-XhoI (gtcgag pBluescript KS+); Site_1: BamHI; Site_2: SalI-XhoI (gtcgag pBluescript KS+); Oligo-dT primed using primer 5'-TTTTTTTTTTTTTTTVN-3', size-selected for average insert size 2.3 kb and normalized to ROT 5. This is a primary library enriched for the state of the sta
Cap-trapper method (Carninci, in preparation).
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Mammalia; Eutheria; Primates; Cat
1 (bases 1 to 868)
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National Institutes of Health, Ma
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Tissue Procurement: ATCC
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/mol_type="mrNA"
/db_xref="taxon:9606"
/clone="IMAGE:6020198"
/tissue_type="epithelioid carcinoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_70"
/clone_lib="NIH_MGC_70"
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/clone_lib="Normally Primer: Oligonic Primer: Oligonic Primer: Oligonic Prechnologies."
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 883)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collect
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5', mRNA sequence.
BQ878247
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
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                                                                           /clone="IMAGE:603538"
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/tissue_type="ductal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_110"
/note="Organ: pancreas; Vector: pOTB7; Site_1: XhoI;
/note="Organ: pancreas; Vector: pOTB7; Site
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LICM2319 row: f column:
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/mol_type="mRNA"
/db_xref="taxon:9606"
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IMAGE:6568492 5', mRNA sequence.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: LLCM2754 row: e column: High quality sequence stop: 640.
Location/Qualifiers
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                GAAAAGACACAGCTGGCTTCCCTAGTACAGAGAACAGGGCTTGGGCCACTTTGGAGAGAC
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GAAAAGACACAGCTGGCTTCCCTAGTACAGAGAACAGGGCCTTGGGCCACTTTGGAGAGAC
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                                                                     TGGATGTGCTGGGGCACACAGGCACTGGAGCGACCGCCGGGGCCAGGGCGCTGAGCCC
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/clone_lib="NIH_MGC_107"
/clone_lib="NIH_MGC_107"
/note="Organ: breast; Vector: pOTB7; Site_1: EcoRI;
/note="Organ: breast; Vector: pOTB7; Site_1: EcoRI;
/note="Corgan: breast; Vector: pOTB7; Site_1: EcoRI;
/note="Child Made by oligo-dT prining."
Site_2: XhoI; cDNA made by oligo-dT prining.

birectionally cloned into EcoRI/XhoI sites using the principal printing.

Site_2: XhoI; cDNA made by oligo-dT prining.

Library constructed by Library of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).

Note: this is a NIH_MGC Library."

Note: this is a NIH_MGC Library."
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/tissue_type="adenocarcinoma, cell line"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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Plate: LLCM1415 row: g column:
High quality sequence stop: 781.
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                                  CGACCCAGGCGCGGGTTTCCGGAGGACAGCCAACAACCGATGCTGCCGCCGCCGTTTCCT
                                                    CGACCCAGGCGCGGGTTTCCGGAGGACAGCCAACAAGCGATGCTGCCGCCGCCGCCGTTTCCT 87
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GATTGGTTGTGGGTGGCTACCTCTTCGTTCTGATTGGCCGCTAGTGAGCAAGATGCTGAG
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                                                                                                                                                                                                 /note="Organ: colon; Vector: pOTB7; Site_1: XhoI; Site_2 EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)" a 243 c 250 g 145 t
                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4644122"
/tissue_type="adenocarcinoma cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_15"
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Pred. No. 2.5e-163;
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602763713F1 NIH_MGC_42
                                                                                                                    Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 846)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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Eukaryota; Metazoa;
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BG829426.1
CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                               Contact: Robert Strausberg,
                                                                                                                                                                                                                                              mRNA sequence
                                                                                                            Inpublished
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Primates;
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quality sequence
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/db xrof-"
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/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_42"
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ity sequence stop: 820.
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UI-H-FT2-bjn-c-13-0-UI 3', mRNA sequence.
CD364905
CD364905
CD364905.1 GI:31148995
EST.
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Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Gary W. Hunninghake, U of I
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/cgap.html
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1 (bases 1 to 747)
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National Cancer Institute, Cancer Genome Anai
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                     TGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGGGGGCCACCAGGCCGTAGCAT 573
                                                                                         AAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGGAGGACCTCAGCCACAT
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 TGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGGGNCCACCAGGCCGTAGCAT
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                                                                                                                                                                                                                                                                           /clone_lib="NCI_CGAP_FT2"
/note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I; NCI_CGAP_FT2 is a subtracted cDNA library constructed from a pool of 81 RNA samples from Alveolar Macrophages challenged with different treatments. The library was subtracted according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. The tissue was provided by Dr. Gary W. Hunninghake of the University of Iowa.
                                                                                                                                                                                                                             TAG_TISSUE-Human Lung Aveolar Macrophage
TAG_SEQ-GGCCATGCCG"
229 c 204 g 166 t 2 others
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/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="UI-H-FT2-bjn-c-13-0-UI"
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99.7%;
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              cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM10432 row: m column: 04
                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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Mammalia; Eutheria;
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602418715F1 NIH_MGC_93
                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                         Unpublished
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National Institutes of Health, Mammalian
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AGENCOURT_10181080 NIH_MGC_107 H
IMAGE:6568905 5', mRNA sequence.
BU538362
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                          found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLCM2755 row: f column: 09
High quality sequence stop: 608.
Location/Qualifiers
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National Institutes of Health, Mammalian
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information
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                                                 TGGCTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCC
 TGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGG
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                                                                                                                                                                            /note="Organ: breast; Vector: pOTB7; Site_1: ECORI; Site_2: XhoI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACCAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                            /lab_host="DH10B (phage-resistant)
/clone_lib="NIH_MGC_107"
                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                           /tissue_type="adenocarcinoma, cell_line"
                                                                                                                                                                                                                                                                                                                                                                            clone="IMAGE: 6568905"
                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
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Pred. No. 1.2e-160;
0; Mismatches 2;
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Mammalla; Eutheria; Primates; Catarrhini;
1 (bases 1 to 949)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
CDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                 Contact: Robert Strausberg, Ph.D Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="adenocarcinoma, cell line"
/lab.host="DH10B (phage=resistant)"
/clone_lib="NH10B (phage=resistant)"
/clone_lib="NH1MGC_107"
/note="Organ: breast; Vector: pOTB7; Site_1: EcoRI;
Site_2: XhoI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCAGGGG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NHH_MGC Library."
21 a 264 c 289 g 174 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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601 952 892 481 832 421 772 361 712 301 652 241 592 181 532 121 472 61

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Gaps

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Search	DЬ	Qy	В	Qy	DЬ	Qy
Search completed: August 25, 2003, 16:45:27 Job time : 2467 secs	842 TCTCAAAAAAAAA 855	1179 TCTCAAAAAAAA 1192	782 AAAGGGGAAGAGACCCCCAAATCAGAATTTTTTTCAATTAAAAGCCCAGGTCCTGGGGAAA 841	1126 ATACGGGAAGAGACCCCAATCAGATTTTTCAAATTAAAGCCAGTCCTGGGAAA 1178	722 GTGGGGGACTGAATTTCCTGGNCCCTGGGGGTCATACCTTGGGGGCTGTTCCCTTCTCTGA 781	1071 GGTGGGGACTGAATTCCCTGGGCCTGGGGTCATAGCTTGGGCTGTTCCTTCTCTG 1125

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1: /cgn2_6/ptodata/1,

2: /dgn2_6/ptodata/1,

3: /cgn2_6/ptodata/1,

4: /cgn2_6/ptodata/1,

5: /cgn2_6/ptodata/1,

6: /cgn2_6/ptodata/1,
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Maximum Match 100%
Listing first 45 summaries
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/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/BCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
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US-09-252-991A-8356
US-09-252-991A-8358
US-09-252-991A-15001
US-09-252-991A-14748
US-09-252-991A-14748
US-09-252-991A-14748
US-09-252-991A-14748
US-09-252-991A-14748
US-09-252-991A-14748
US-09-252-991A-14748
US-09-16-264-1
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US-09-16-264-1
US-09-16-264-1
US-09-16-3140-1
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Sequence 12106, A
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Sequence 773, Ap
Sequence 8450, Ap
Sequence 8482, Ap
Sequence 8483, Ap
Sequence 8356, Ap
Sequence 15001, A
Sequence 15001, A
Sequence 14880, Ap
Sequence 14880, Ap
Sequence 1, Appl
Sequence 153, App
Sequence 153, App
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 3, Appl
Sequence 1, Appli
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RESULT 2 US-09-252-991A-12314 ; Sequence 12314, Application US/09252991A ; Patent No. 6551795 ; GENERAL INFORMATION: ; APPLICANT: MAIC J. Rubenfield et al. ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUEN	Hest Local Similarity 55.6%; Pred. No. 0.02; Best Local Similarity 55.6%; Pred. No. 0.02; Matches 109; Conservative 0; Mismatches 84; Indels 3; Gaps Qy 220 TCCTGGCCACGCAGCGGTGGCACAGGCACCCCGGCCGTGGCCTCTAGCTCCCTCTT	-991A-12106/c e 12106, Application US/09252991A NO. 6551795 INFORMATION: NUTLEIC ACID AND AMINO ACID DE INVENTION: NUCLEIC ACID AND AMINO ACID DE INVENTION: AERUGINOSA FOR DIAGNOSTICS & FAPPLICATION NUMBER: US/09/252,991A F FILING DATE: 1999-07-18 RAPPLICATION NUMBER: US 60/074,788 FILING DATE: 1998-02-18 RAPPLICATION NUMBER: US 60/094,190 FILING DATE: 1998-07-27 OF SEQ ID NOS: 33142 NO 12106 DNA ISM: PSeudomonas aeruginosa 1991A-12106	28 36.8 3.1 960 4 US-09-252-991A-16064 29 36.8 3.1 2430 4 US-09-252-991A-16379 31 36.6 3.1 3675 4 US-09-252-991A-16329 32 36.6 3.1 1269 4 US-09-252-991A-10329 33 36.6 3.1 1269 4 US-09-252-991A-10434 33 36.6 3.1 1266 4 US-09-252-991A-16161 33 36.6 3.1 1566 4 US-09-252-991A-16161 36 36.6 3.1 2028 4 US-09-252-991A-10712 37 36.6 3.1 2028 4 US-09-252-991A-10712 38 36.6 3.1 2094 4 US-09-252-991A-10712 39 36.6 3.1 238 1 US-08-252-991A-10712 39 36.6 3.1 238 2 US-08-217-0448-1 40 36.6 3.1 238 1 US-08-28-2338-7 41 36.6 3.1 4413765 3 US-09-103-840A-2 42 36.6 3.1 4413529 3 US-09-103-840A-1 43 36.4 3.1 1053 4 US-09-620-312D-1101 5 45 36 3.0 4600 4 US-09-702-705-1797
CID SEQUENCES RELATING TO PSEUDOMONAS	; B4; Length 1050; ; B4; Indels 3; Gaps 1; GCCGTGGCCTCTAGCTCCTCTT 276	S AND	16064 Sequence 16064, A 16171 Sequence 16171, A 16309 Sequence 16309, A 16322 Sequence 10615, A 10616 Sequence 10615, A 16434 Sequence 16434, A 16161 Sequence 16455, A 16050 Sequence 10712, A 10712 Sequence 1, Appli 2 Sequence 1, Appli 3 Sequence 2, Appli 5 Sequence 2, Appli 1 Sequence 2, Appli 1 Sequence 2, Appli 1 Sequence 2, Appli 1 Sequence 1, Appli 1 Sequence 1, Appli 1 Sequence 2, Appli 1 Sequence 1, Appli 1 Sequence 1, Appli 1 Sequence 1, Appli 1 Sequence 2, Appli 1 Sequence 1, Appli 1 Sequence 2, Appli

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TITLE OF INVENTION: No. 6569662el Nucleic Acids and TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 7840IP2B
CURRENT APPLICATION NUMBER: US/09/620,312D
CURRENT FILING DATE: 2000-07-19
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
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                                                    SOFTWARE: pt_FL_genes Version 1.0 SEQ ID NO 773
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LENGTH: 3132
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APPLICANT:
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APPLICANT:
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PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                         PRIOR FILING DATE:
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   ORGANISM:
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                                  LENGTH: 2629
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Local Similarity 55.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 TCCTGGCCACGCGGTGGCACAGGCACCCCCGGCCGTGGCC---TCTAGCTCCCTCTT
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 Homo
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Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
Zhou, Ping
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Wang, Zhiwei
John Tillinghast
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Chen, Rui-hong
Zhao, Qing A.
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Zhang, Jie
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Asundi, Vinod
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US-09-252-991A-8450/, Application US/09252991A
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; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-8450
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; LOCATION: (73)..(798)
US-09-620-312D-773
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SEQ ID NO 8450
LENGTH: 702
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Best Local
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Best Local
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COURENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1990-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                  541
                                     421
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                                                                                                                                                                                                                                                                                                                                            152 GGTCTGAAGCGGAAACGGGAGGAGGAGGAGGAGGAACCTCTGGCAGTCGACTCCTGG
452 GCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGGAGGACCTCAGCCAC
                                                                                                                                                                                                                                                                                      212 TGGCTAGATCCTGGCCACGCAGCGGTGGCACAGGCACCCCCGGCCGTGGCCTCTAGCTCC
                                                                                                                                                                                                                                                                                                                          661 GGTCAGCCGCGCGCGCGCGCAGGGTCACCAGGCGGATCGCCCCGCGCGCTCCTCGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                               193;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269 TCCCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGCAGAGTGAGCCGGAC
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                                     GGCCAGCAACCAGTCGCGGCGCTCGCCGGTGCCGGGTCGCCAGTTCGCCGGGCAGACCCAT
                                                                                                         GGCGCCGTCGAGCAGCGGTCGCGCCTTGCTCCGCGCGTTCAGGCGCAGGCGGCTGCCGTC
                                                                                                                                                                                CTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGCAGAGTGAGCCGGACCTG
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                                                                    GCTGCCCTGCCACCTGTGCCTAGCCCACCTGCAGCCCCCAGTGTGGCTGACAACTTACTG 451
                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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Pred. No. 0.057;
0; Mismatches 249;
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Pred. No. 0.049;
0; Mismatches 104;
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RESULT 6
US-09-252-991A-8483/c
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US-09-252-991A-8324
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
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Best Local S
Matches 193
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SEQ ID NO 8324
LENGTH: 1278
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Patent No. 655179
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ORGANISM: Pseudomonas aeruginosa
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                                                                              ATCGGGGGAGCAGCGCCCAGCC
                                                                                                        ATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGGGGGCCACCAGGCCGTAGC
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US-09-252-991A-8356
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GENERAL INFORMATION:

APPLICANT: MAIC J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO E
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 8483

LENGTH: 1362
GENERAL INFORMATION:
APPLICANT: MATC J. Rubenfield et al.
APPLICANT: MATC J. Rubenfield et al.
APPLICANT: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILLING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                         Sequence 8356, Application US/09252991A Patent No. 6551795
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
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Pred. No. 0.071;
0; Mismatches 249;
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US-09-252-991A-3638
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; LENGTH: 636
; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-8356
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Best Local S
Matches 134
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LENGTH: 1314
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS A
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                      ORGANISM: Pseudomonas
                                                                                                                                                                                                                                Local Similarity
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GCCTAGCGCTGATCGGCAGCGGACCGGTAGCCCATGCCCACCTGCAATACGTGAAGGGCC
                                                                                                   CTAGCCCACCTGCAGCCCCCAGTGTGGCTGACAACTTACTGGCAAGCTCGGACGCTGCCC
                                                                                                                                                                             TGAACACTCTGCGGCGCATCCAGGCGTCCATGGCACCCGCGGCTGCCCTGCCACCTGTGC
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                                 TTTCAGCCTCCATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGG
                                                                      CGCGCACCGCCACCACCGCCGTGGCGGTGGATGCCCTGGCTCCGGCCGAAGCCGGCC
                                                                                                                                          TGATGTCGATGCAGACCGGCCAGCCCTTGCTGCTGCTGATGCCGCCCGGCTGACCACCG
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Pred. No. 0.069;
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                                                                                                                                                                                                                                               Length 1314;
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RESULT 10 US-09-252-991A-14880/c ; Sequence 14880, Application ; Patent No. 6551795 ; GENERAL INFORMATION:

US/09252991A

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GENERAL INFURGALLER.

GENERAL INFURGACIO.

REPLICANT: MAIC J. RUBENFIELD &C LA.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENTIFE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THE FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/094,190

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US-09-252-991A-15001/c
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US-09-252-991A-15001
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Best Local S
Matches 209
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NUMBER OF SEQ ID NOS:
SEQ ID NO 15001
LENGTH: 2622
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CAGGGGAGTATCAGCATTCATGGTTAAGTCCTTGAAACAAAAACGCCCGGC
                                     CATCGGGGGAGCAGCCCAGCCTGGGTGCCTTGGACCTGCTGGGCCCAGC
                                                                               CGGTTTGCGCTGCCAGTAGTCGCGGAGGAATTCGGCAGCGGTCAGTCCGCCCAGAAGTTG
                                                                                                                   CATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGGCGAGGGGGCCCACCAGGCCGTAG 570
                                                                                                                                                            GGCCAGCTCGTCGGCGGACAGCGGGCTTTCGAAGTCCGGGATCGCCTGGCGGACCAGCAG
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NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
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Pred. No. 0.82;
0; Mismatches 257;
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                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILLING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILLING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 14748
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                                                                                           Matches
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PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 14880
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Best Local Similarity
                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                         APPLICANT: MAIC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
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                                                                                                                                                                     ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                  ENGTH: 1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF INVENTION:
211 GTGGCTAGATCCTGGCCACGCAGCGGTGGCACAGGCACCCCCGGCCGTGGCCTCTAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151 GGGTCTGAAGCGGAAACGGGAGGAGGAGGAGGAGGAACCTCTGGCAGTCGACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118;
                                                                                             118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1095
                            GGCCCTGAAGCAGGAATACGTCGTAGTTGTCGAAGTGCGGACCGACGCCGCCGCCGGGAG
                                                         GGGTCTGAAGCGGAAACGGGAGGAGGAGGAGGAAGGAACCTCTGGCAGTCGACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTCCCGTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTCCGGCAGGTGCTGGTAGTCCTCCTCCTGGAACGGGCCACGGCGCATTTCCCACGGGG 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGGCACCTGGTGGTCGTGAACACTCTGCGGCGCATCCAGGCGTCCATGGCACCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGTTGGGCGACTTCCGGGACGAACTGGTCTACCGCCTGCACCAGCAGGGTCCAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGCAGAGTGAGCCGGACCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGCTAGATCCTGGCCACGCAGCGGTGGCACAGGCACCCCCGGCCGTGGCCTCTAGCTC
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                                                                                             Conservative
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NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
                                                                                                        3.38;
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                                                                                         Score 38.8; DI
Pred. No. 1.2;
0; Mismatches
                                                                                           0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                      DB 4;
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                                                                                         132;
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                                                                                                                     Length 1317;
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                                                                                         Indels
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SEQ ID NO 31
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
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RESULT 13
US-09-370-838-153
; Sequence 153, Application US/09370838
; Patent No. 6444425
                                              GENERAL INFORMATION:
APPLICANT: Reed, Steven G.
APPLICANT: Lodes, Michael J.
APPLICANT: Mohamath, Roadoh
APPLICANT: Secrist, Heather
TITLE OF INVENTION: COMPOUNDS FOR THERAPY AND DIAGNOSIS OF
TITLE OF INVENTION: LUNG CANCER AND METHODS FOR THEIR USE
FILE REFERENCE: 210121.4/5C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/501,115
CURRENT FILLING DATE: 2000-02-09
EARLIER APPLICATION NUMBER: 60/119,585
EARLIER FILING DATE: 1999-February-10
NUMBER OF SEQ ID NOS: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Cahoon, Rebecca E.
APPLICANT: Fader, Gary M.
APPLICANT: Rafalski, Antoni
TITLE OF INVENTION: Plant Cinnamyl-Alcohol Dehadrogenase Homologs
FILE REFERENCE: BB1328 US NA
CURRENT APPLICATION NUMBER: US/09/370,838
CURRENT FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 AAACGGGAGGAGGAGGAGGAAGGAACCTCTGGCAGTCGACTCCTGGTGGCTAGATCCT
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Pred. No. 1.5;
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Patent No. 6426186
GENERAL INFORMATION:
APPLICANT: Jones, Karen A.
APPLICANT: Volkmuth, Wayne
APPLICANT: Walker, Michael G.
                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                         SOFTWARE: P
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                                                                                                                                                                              NAME/KEY: unsure
LOCATION: 33, 51, 79, 211, 369, 483-484,
OTHER INFORMATION: a, t, c, g, or other
-09-484-970B-106
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                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Jones, Karen A.
APPLICANT: Volkmuth, Wayne
APPLICANT: Walker, Michael G.
TITLE OF INVENTION: BONE REMODELING GENES
FILE REFERENCE: PB-0014 US
CURRENT APPLICATION NUMBER: US/09/484,970B
CURRENT FILING DATE: 2000-01-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EARLIER APPLICATION NUMBER: US 09/285,323 EARLIER FILING DATE: 1999-04-02 NUMBER OF SEQ ID NOS: 289
                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ
                                                                                                                                                                                                                            FEATURE:
NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No. 6426186 444857.15CB1
                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                              TYPE: DNA
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                                                                                                                         Local Similarity
nes 70; Conserv
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403 GAGCTGGAGGTGCTGGAGAGGAAGCCCGCCGGCCGGGCTGTCCGCGGGCCCCAGTGCCCACC 462
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                              CTCATGGATGTGCTGGTGGGCACACAGGCCACTGGAGCCGCCGGGGCCCAGGGCCTGA 850
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                                                           CTAGTCCTGGGCAACTTCACATCCGTCCTCCTGTCTCAGG 1019
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                                                                                                                                                                                                                                                                                                                                                         PERL Program
                                                                                                                                                                                                                                                                                                                                                              ID NOS: 172
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ilarity 46.1%;
Conservative
                                                                                                                         Conservative
                                                                                                                                    3.2%;
                                                                                                                      Score 38.2; DB Pred. No. 2.6; 0; Mismatches
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Pred. No. 1.
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Mismatches 151;
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                                                                                                                                                   DB 4; Length 4822;
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; LOCATION:
US-08-964-268-1
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US-08-964-268-1/c
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; GENERAL INFORMATION:
; APPLICANT: WEI, YII
APPLICANT: RUBEN,;
; APPLICANT: SANCAR,
                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 202-371-2600
TELEPHONE: 202-371-2540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 4185 base pairs
TYPE: nucleic acid
                                                                                                                            Matches
                                                                                                                                         Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN &
STREET: 1100 NEW YORK AVENUE, NW, SUITE
                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/030,189
FILING DATE: 04-NOV-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/964,268
FILING DATE: HEREWITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: HUMAN BLUE-LIGHT PHOTORECEPTOR hCRY2 NUMBER OF SEQUENCES: 22
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Similarity 63.0%;
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Search completed: August 25, 2003, 16:47:17 Job time : 104 secs

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ALIGNMENTS

Streptomyces muray	ABZ71131	25	36321	3.5	41.4	45
	ABZ71137	25	N	3.5	41.4	44
Streptomyces rimos	AAD53019	25	1413	3.5	41.8	43
breast canc	ABT10719	24	122748	ω .5	42.2	42
Mouse haematopoiet	AAL41497	24	2082	٠	42.2	41
Streptomyces albof	AAD53024	25	1428		42.2	40
Mouse Glial cell l	AAZ49675	21	1387		42.4	39
GDF-la cDNA sequen	AAQ20688	13	1387		42.4	38
Cardiac adenylyl c	AAQ95540	16	4356	3.6	42.6	37
Human colon cancer	AAH33113	22	2038		43	36
Lung cancer associ	AAF18134	21	2038		43	35
D)	ABL48926	24	396		43	34
	ABT03243	24	396		43	33
Human ovarian canc	AAF94976	22	396	3.6	43	32
ac adenylyl	AAQ37543	14	4356		44.2	31
polynucleot	AAI60667	22	2629	3.7	44.6	30
	AAI58881	22	2629	3.7	44.6	29
cDNA coexpr	AAD34182	24	2447	3.7	44.6	28
haen	AAL41498	24	2082	3.7	44.6	27
	ABL'49854	24	1314	3.7	44.6	26
	AAH06538	22	862	3.7	44.6	25
NOV34a c	ABX97063	24	1253	4.1	49.2	24
spliced	ABN55795	24	65	4.4	52.2	23
spliced	ABN39710	24	60	5.0	60	22
Novel murine polyn	ABS69457	24	165	10.1	120.8	21
clone	AAZ29504	21	190	•	188	20
Incyte clone 13520	AAZ29488	21	189	15.9	189	19
Human polynucleoti	ABZ11398	24	363	٠	232	18
Porcine muscular s	AAS62144	24	536	•	237.6	17
7	AAX41286	20	301		293.4	16
EST clone G21. Ho	AAV86113	20	450		433.8	15
Incyte clone 22384	AAZ29502	21	447	37.5	447	14
Human cDNA clone r	AAK93731	22	696		637.2	13
ന	AAK91707	22	696		637.2	12
an molecule	AAL49936	24	5869	56.0	667.4	11
	AAX36177	20	711	59.4	707.8	10
DNA representing l	ABK81819	24	5746	65.3	777.8	9

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RESULT 1 AAZ29482 CDS CECRP-3; cell cycle regulation protein-3; tissue expression; cancer; inflammation; pBluescript vector; gene therapy; disease diagnosis; disease monitoring; chromosomal mapping; cell proliferation; cell proliferative disorder; ds. 08-JUN-1998; DNA encoding human cell cycle regulation protein-3. 14-MAR-2000 AAZ29482; AAZ29482 standard; DNA; 1192 08-JUN-1999; 16-DEC-1999. WO9964593-A2 Homo sapiens (first entry) 98US-0088695 99WO-US12906 /*tag= a /product= "Cell cycle regulation protein-3" Location/Qualifiers /*tag= ВP

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Matches 1192;
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   CTTGGACCTGCTGGGCCCAGCCGGCTGTCTACTGGACGATGGGCCTTGAGGGCCTGTT
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                                                                   CTTGGCAGACGAGGGCCCAGCCGTAGCATCGGGGGAGCAGCCCCAGCCTGGGTGC
                                                                                                                                       CATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACC
                                                                                                                                                                                                       TGCAGCCCCCAGTGTGGCTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTTCAGCCTC
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                                                                                                                    CATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to full length GENSET human nucleic acids encoding CC potentially secreted proteins. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of CC diseases associated with inappropriate GENSET gene expression. For CC example, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a comparison of the patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate CC exister expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides may be used as antigens in the production of antisponists and in assays to identify modulators (agonists and antagonists) of GENSET polypeptide expression and activity. The present sequence is a GENSET nucleic acid of the invention.
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                          CTTGGACCTGCTGGGCCCAGCCACTGGCTGTTCTACTGGACGATGGGCTTGAGGGCCTGTT
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                                                                         Hayashi K,
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       English
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Query Match
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Matches 1184;
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Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
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21-JAN-2000;
25-APR-2000;
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2000US-0488725.
2000US-0552317.
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Matches 1167
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                                             CGTAGCATCGGGGGAGCAGCGCCCAGCCTGGGTGCCTTGGACCTGCTGGGCCCAGCCCT
                                                                                        AGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGGAGGGGCCACCAGGC
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                                               CTTGGGCTGTTCCTTCTGATACGGGAAGAGACCCCAATCAGATTTTTCAAATTAAAGC
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AAC76627 standard; cDNA; 1222

08-FEB-2001 (first entry)

Human ORFX ORF2182 polynucleotide sequence SEQ ID NO:4363

RESULT 5
AAC76627/
ID AAC7
XX AAC7
XX O8-F
AC AAC7
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XX Hom
XX fw Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
w vulnerary; antipsoriatic; antiarkinsonian; nootropic; neuroprotective;
w anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
filmunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
filmunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
filmunosuppressive; antidiation;
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31-MAR-2000; 2000WO-US08621.

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Best Local S
Matches 1178
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02-APR-1999;
05-APR-1999;
30-MAR-2000;
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AAX97688 standard; DNA; 1182 ВP

13-SEP-1999 (first entry)

Extended human secreted protein coding sequence, SEQ Ħ ŏ.

Secreted cellular Secreted protein; human; cytokine; cellular proliferation; cell movems cellular differentiation; immune system regulator; anti-inflammatory; haematopoiesis regulator; tissue growth regulator; tumour inhibitor; reproductive hormone regulator; chemotaxis; chemokinesis; gene therap; disease; human; cytokine; cellular proliferation; cell movement;

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17-DEC-1997;
09-FEB-1998;
13-APR-1998;
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                                                        GCGTCCATGGCACCCGCGGCTGCCCTGCCACCTGTGCCTACCCCACCTGCAGCCCCCANT
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97US-0069957.
98US-0074121.
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                                                                                                           Homo
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                                                                                                                               blood;
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                                                                                                                                                                                                                             standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; g21_1;
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                                                                                                                                                                                  (first entry)
             10..246
/*tag= 1
247..717
/*tag=
                                                                           Location/Qualifiers 10..720
                                          /*tag= a
/note= "this region is
Claim 12(b)"
                                                                 /*tag=
                                                                                                                                                                                                                             CDNA; 1078
                        ь
   a
                                                                                                                                        human;
                                                                                                                                                            protein g21_1 cDNA.
                                                                                                                                                                                                                             ВP
                                                                                                                                       therapy;
                                                      specifically
                                                                                                                                       diagnosis;
                                                      claimed
                                                                                                                                         vaccine;
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1093 1021 1033 961 973 901 913 841 853 781 793

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cc codes for a novel human secreted protein, 9211 (see AAV31829).

CC The clone was isolated from a human adult blood (peripheral blood commonuclear cells treated with phytchaemagglutinin, phorbol mononuclear cells treated with phytchaemagglutinin, phorbol cc myristate acetate and mixed lymphocyte reaction) cDNA library cc using human cDNAs that had themselves been identified in a human cc adult blood cDNA library using methods selective for cDNAs encoding cc secreted proteins. The clone is deposited in composite deposit cc ArCC 99700. The invention provides new human secreted proteins cc (see AAV31828-38) and polynucleotides (see AAZ1983-901) isolated from cc foetal cell, adult blood, adult brain and foetal kidney cDNA cc libraries. They are predicted to have biological activities which cc would make them suitable for treating, preventing or ameliorating cc medical conditions in humans and animals, although no supporting cc data are given. Suggested activities include nutritional, cytokine, tissue growth, cell proliferation and differentiation, cc immunositumulant (e.g. as vaccine), immunosuppressive, cantinflammatory, cadherin or thrombolytic, receptor/ligand activity, cantivin or inhibin, chemotactic or chemokinetic, haemostatic or thrombolytic, receptor/ligand activity, cc antilinflammatory, cadherin or tumour invasion suppressor, and cc tumour inhibition activities. The polynucleotides are also stated cc to be useful for gene therapy.
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P-PSDB; AAY31829.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-MAR-1998;
17-MAR-1999;
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                                                                                                             CCTCTGGCAGTCGACTCCTGGTGGCTAGATCCTGGCCACGCAGCGGTGGCACAGGCACCC
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                                                  CCGGCCGTGGCCTCTAGCTCCCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTG
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         CAGCAGAGTGAGCCGGACCTGCGGCACCTGGTGCTGGTCGTGAACACTCTGCGGCGCATC
                                                                                               CCTCTGGCAGTCGACTCCTGGTGGCTAGATCCTGGCCACGCAGCGGTGGCACAGGCACCC
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Treacy M,
                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                     for gene
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Steininger RJ;
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                                       GCCCTGGGGTCATAGCTTGGGCTGTTCCTTCTCTGATACGGGAAGAGACCCCAATCAGAT
                                                                              CTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGAC
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                                                                                                                                                                        CCTCGAAAAGACACAGCTGGCTTCCCTAGTACAGAGAACAGGGCTTGGGGCCACTTTGGAG
                                                                                                                                                                                                                                           CTCATGGATGTGCTGGTGGGCACACAGGCACTGGAGCGACCGCCGGGGCCCAGGGCGCTGA
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                    CCTCGAAAAGACAGCTGGCTTCCCTAGTACAGAGAACAGGGCTTGGGCCACTTTGGAG
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RESULT 8

AAS78542

ID AAS7

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XX AAS7

XX DT 13-F

XX DE DNA

XX Huma

XX Huma

XX food

XX food
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DNA encoding novel human diagnostic protein #14346.

13-FEB-2002

(first

entry)

Human; chromosome mapping; gene mapping; gene therapy; food supplement; medical imaging; diagnostic; genetic of food supplement; medical imaging; diagnostic; supplement; disorder; forensic; SS

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                                                                                                                                                                                                                                                             The invention relates to isolated polynucleotide (I) and CC polypeptide (II) sequences. (I) is useful as hybridisation probes, CC polynucrase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC for identifying expressed genes. (I) is useful in gene therapy techniques CC for identifying expressed genes. (I) is useful in gene therapy techniques CC (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating CC imaging of sites expressing (II). (I) and (II) are useful for treating CC responsible for genetic disorders or other traits to assess biodiversity responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed control of the invention.
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Matches 1111
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                                                                                                                                                                                                                                                             Sequence
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23-AUG-2000;
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                                                                                                                                                                                                                                                                                ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                      1111;
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                                                                                                                                                                                                                                Similarity
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                                                  CTGATTGGTTGTGGGTGGCTACCTCTTCGTTCTGATTGGCCGCTAGTGAGCAAGATGCTG
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          CTGATTGGTTGTGGGTGGCTACCTCTTCGTTCTGATTGGCCGCTAGTGAGCAAGATGCTG
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                                                                                            Conservative
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2000US-0649167.
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Lung specific g cancer staging; DNA representing lung specific gene gene; ne; gene therapy; vaccine; cancer monitoring; cancer #5 lung

diagnosis;

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Matches 779
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New lung specific genes
therapy or as a vaccine
measuring metastases of
or imaging lung cancer
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                     AGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACCCTTGGCAGACGAGGGGCCACCAGGC
                                            TTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGGAGGACCTC
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                                              The present sequence encodes a protein, designated p16BP1, which bind to the cell cycle regulator protein p16. p16BP1 plays a role in cell cycle regulation by binding to p16 which is a protein binding to a cyclin D dependent kinase (CDK4) involved in the regulation of cell cycle progression. The gene encoding p16BP1 has been localized to 19q13.1-13.2. The binding protein, polynucleotides encoding it, and antibodies recognizing it are useful in the investigation of cell cyc progression and regulation, particularly in connection with cancer formation, for gene therapy of cancer and other cell cycle disorders, and for diagnosis of such disorders. The sense or antisense polynucleotides are useful as probes to screen a cDNA library.
                                                                                                                                                                                                                                                                                                                                                                                               Claim 7; Page 35-36; 40pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      New p16-binding protein cell cycle disorders
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P-PSDB; AAY02619.
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Best Local S
Matches 709
                                                         cytostatic; antiarteriosclerotic; hepatotropic; anti-HIV; antiallergic; antiinflammatory; antiasthmatic; cerebroprotective; nootropic; neuroprotective; antiparkinsonian; cardiant; antianginal; gene; ss.
                                                                                                                           Human
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2.2e-170;
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15-FEB-2001;
23-FEB-2001;
07-MAR-2001;
09-MAR-2001;
28-NOV-2001;
01-FEB-2002;
                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to human proteins and coding sequences of molecules for disease detection and treatment MDDT. The sequences can be used in the treatment of diseases associated with the decreased expression or overexpression of MDDT, such as cell proliferative (cancer, atherosclerosis, hepatitis), autoimmune/inflammatory (e.g. ALDS, allergies, Addison's disease, asthma), developmental (dwarfism, renal tubular acidosis), neurological (e.g. stroke, Parkinson's disease, epilepsy) and cardiovascular (congestive heart failure, myocardial infarction, angina pectoris) disorders. The present sequence is a coding sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human molecules for disease detection and treatment (MDDT), for diagnosing, treating and preventing diseases or conditions associated with the aberrant MDDT expression, e.g. cancer, AIDS,
                                                                                                                                                                                                                                                                                                                                                                  Sequence
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DB; AAO19407.
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11 CD, Yue H,
a AJA, Ghandi
ar J, Griffin
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CTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGG
                                                                                                   CCATGGCACCCGCGCTGCCCTGCCACCTGTGCCTAGCCCAGCCTGCAGCCCCCAGTGTGG
                                             CTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTCCATGGCCAGCCTCCTGG
                                                                                          CCATGGCACCCGCGGCTGCCCACCTGTGCCTAGCCCACCTGCAGCCCCCAGTGTGG
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; 2001US-269618P.
; 2001US-271118P.
; 2001US-274486P.
; 2001US-274436P.
; 2001US-334229P.
; 2002US-353284P.
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99.9%;
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Ding L, Gietzen KJ, Ison CH, Lu
AR, Thangavelu K, Sanjanwala MM,
JA, Swarnaker A, Azimzai Y, Sapp
Lu Y, Tran UK, Marquis JP;
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                                                                                                                                                                                                                                                                                                                    Score 667.4; DB 24; Pred. No. 8.5e-160; Mismatches 1;
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RESULT 12
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ID AAK91
AC AAK91
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                                        clones. 830 cDNA molecules encoding a human protein have been solated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of a cDNA provided in the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
    Sequence
                                                                                                                                                                                                                                                                                                  The invention relates to primers for synthesising full length cDNA
                                                                                                                                                                                                                                                                                                                                                  Claim
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2000JP-0118774.
2000JP-0183765.
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na T, Nagai
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K, Kojima
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                                                              Homo
                                                                               Human;
       07-JUL-2000;
                         05-SEP-2001.
                                            EP1130094-A2
                                                                                                  Human cDNA clone representative sequence,
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                                                                                                                                                       AAK93731 standard;
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                                                                                                                   (first
                                                                              cDNA; cDNA synthesis; oligo-capping;
                                                                                                                                                        cDNA;
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98.1%;
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11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence was used as the representative sequence from a human clone which was used in homology searches to identify the clone.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      isolated and nucleotide sequences of 5'-
molecules have been determined. Primers f
cDNA are useful for a recommendations.
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Wakamatsu A,
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                                                             TGCAGCCCCCAGTGTGGCTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTC
                                                                                                        CCACAGCCTGCAGCAGAACTGAGCCGGACCTGCGGCACCTGGTGCTGGTCGTGAACACTCT
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                                CATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACC
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2000JP-0183765.
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a T, Nagai
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Pred. No. 2.1e
0; Mismatches
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K, Kojima
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'- and 3'-ends of the cDNA
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2.1e-152;
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S, Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 other;
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence Incyte clone 2238411F6 related to cell cycle regulation proteins. CECRPs are activators of cell proliferation inhibitors of cellular processes that modulate proliferation. They used to treat cell proliferative and immune disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel regulatory proteins, for diagnosis, treatment and cell proliferative and immune system diseases
                                                                                                                                                                                                                                                                                                                                         Sequence 447 BP;
                                                                                                                                                                                                                                                                                                                                                                                 specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure;
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                                                                                                                         This sequence represents an expressed sequence tag (EST), and is a polynucleotide of the invention. The polynucleotides of the invention all secreted EST sequences isolated from a variety of human tissue sources. The EST sequences and proteins encoded by them are predicted have useful biological activities which would make them suitable for treating, preventing or ameliorating medical conditions in humans and animals, although no supporting data is given. Suggested activities include nutritional activity, immune stimulating or suppressing activity haemastopolesis regulating activity, tissue growth activity, haemostat activin/inhibin activity, chemotactic/chemokinetic activity, haemostat
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Koga, H.

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

	AUTHORS	REFERENCE			ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	BD127703	RESULT 1
Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and	Ota T Nishikawa T Tsogai T Havashi K Tshii S Kawai V	1 (bases 1 to 2113)	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens	Homo sapiens (human)	JP 2002017375-A/3134.	BD127703.1 GI:23222648	BD127703	Primer for synthesizing full-length cDNA and use thereof.	BD127703 2113 bp DNA linear PAT 18-SEP-2002		

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Patent: RESEARCH INSTITUTE
OS Homo sapitens (human)
PN JP 2002017375-A/3134
PD 22-JAN-2002
PF 07-JUL-2000 JP 2000253172
PF 07-JUL-2000 JP 2000253172
PF TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KC PI ISHII, ANWAI,AI WAKAMATSU,TOMOYASU SUGIYAMA,K SHINICHI KOJIMA,
PI TETSUJI OTSUKI,HISASHI KOGA
PC C12P1/09,C07K14/47,C07K16/18,C12N1/15,C12N1/19,
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Submitted (25 MAR-2002) Takao Isogai, Helix Research Institute, Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology; cDNA library construction: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; cDNA 5'-& 3'-end one pass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Center etc.).
                                                                                                                                                                                                                                           Isogai,T., Ota,T., Nishikawa,T., Hayashi,K., Otsuki,T., Suzuki,Y., Nagai,K., Sugiyama,T., Suzuki,Y., Nagai,K., Sugano,S., Ishii,S., Kawai-Hio,Y., Satto,K., Yamamoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Ono,T., Okano,K., Yoshikawa, Aotsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and
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Isogai, T. and Otsuki, T.
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                                                                                  CTTGGCAGACGAGGGGCCACCAGGCCGTAGCATCGGGGGAGCAGCGCCCAGCCTGGGTGC
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                          ATTGGACTACCTCATGGATGTGCTGGTGGGCACACAGGCACTGGAGCGACCGCCGGGGCC
                                                                                                                     CTTGGACCTGCTGGCCCAGCCACTGGCTGTCTACTGGACGATGGGCCTGAGGGCCTGTT
                                                                                                                                                                                         CATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACC
                                                                                                                                                                                                  CATGGCCAGCCTCCTGGAGGACCTCAGCCACATTGAGGGCCTGAGTCAGGCTCCCCAACC
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 TGCAGCCCCAGTGTGGCTGACAACTTACTGGCAAGCTCGGACGCTGCCCTTTCAGCCTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /moi_type="mRNA"
/db_xref="taxon:9606"
/clone="maxMAX1000403"
/tissue_type="mammary gland"
/clone_lib="MAMAX1"
/note="cloning vector: pME18SFL3"
a 561 c 578 g 521 t
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99.98;
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Clone distribution: MGC clone distribution information can through the I.M.A.G.E. Consortium/LLML at: http://image.lln Series: IRAL Plate: 12 Row: i Collars: 23 This clone was selected for full length sequencing because passed the following selection criteria: matched mRNA g1: 1 Location/Qualifiers
                                                                                                                                            Contact: nisc_mgc@nhgri.nih.góv
Shevchenko,Y., Wetherby,K.D., Beckstrom-Sternberg,S.M.,
Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Brooks,S.,
Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Lim,M., Maduro,Q.L., Masiello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell JJ., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tiongson,E.E., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramur
Sequencing Center (NISC),
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (05-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                  Web site:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 1179)
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IMAGE:3613213,
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/organism="Homo sapiens" /mol_type="mRNA" /db_xref="LocusID:29950" /db_xref="taxon:9606"

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Matches 1160; Conserv
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               GAGGAAGCTCCGGAGCTGGACGAGGCCGAATTGGACTACCTCATGGATGTGCTGGTGGGC
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343 c 368 g 225 t
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/tissue_type="Uterus, endometrium adenocarcinoma"
/clone_lib="NIH_MGC_44"
/lab_host="DH10B-R"
/note="Vector: pOTB7"
/lab..828
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/product="CDK4-binding
/protein_id="AAHO2670.1
/db_xref="GI:12803669"
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                                                                                                                                                                                                    Submitted (05-Jan-1999) Cell Cycle for Cancer Research, Wilmslow Road, Location/Qualifiers
                                                                                                                                                                                                                                                                                                                       Sugimoto, M., Nakamura, T., Ohtani, N., H. Shimamoto, A., Furuichi, Y., Okumura, K., Regulation of CDK4 activity by a novel
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                                  /gene="SEI1"
/codon_start=1
/product="CDK4-binding protein_id="AAF08349.1'
/db_xref="GI:6434876"
/translation="MLSKGLKRKREEEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSS
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/db_xref="taxon:9606"
/chromosome="19"
                                                                                               /gene="SEI1"
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                                                                                                                                    /map="19q13.1-q13.2"
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BD139394 I GI:232343:
JP 2002508182-A/146.
Homo sapiens (human)
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Extended cDNA of secretory protein
Patent: JP 2002508182-A 146 19-MAR-2002;
GENSET
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                                                   AGAACTGCGTCTCGCGACCCAGGCGCGGGTTTCCGGAGGACAGCCAACAAGCGATGCTGC
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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                                        ATGGATGTGCTGGTGGGCACACAGGCACTGGAGCGACCGCCGGGGCCCAGGGCGCTGAGCC
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                                                          CTGGGGTCATAGCTTGGGCTGTTCCTTCTCTGATACGGGAAGAGCCCCCAATCAGATTTT
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Hospital, 5 Lower Kent Ridge |
Location/Qualifiers
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Hsu,S.I., Yang,C.M., Sim,K.G.
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/product="TRIP-B1"
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/db_xref="G::14029834"
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/translation="MLSEGLIKRIPLYLVVNTLRRIQASMAPAAALPPVPSPPAAPSVADN
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ATGCLLDDGLEGLFEDIDTSMYDNELMAPASEGLKPGPEDGPGKEEAPELDEAELDYL
MDVLVGTQALERPPGPGR*

343 c 365 g 225 t
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/function="a CDK4-binding protein that rende activity of cyclin D/CDK4 resistant to the i effects of p16(INK4a)"
/note="hTRIP-Br1; transcriptional regulator with the PHD-bromodomain; hTRIP-Br1(SEI-1)"
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/map="19q13"
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/mol_type="mRNA"
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To cite this work please use: NIEHS-SNPs, Environmental Genome Project, NIEHS ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).
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1 (bases 1 to 5917)

Rieder, M.J., Braun, A.C., Montoya, M.A., Chung, M.-W., Nguyen, C.P., Nguyen, D.A., Livingston, R.J., Poel, C.L., Robertson, P.D., Schackwitz, W.S., Sherwood, J.K., Witrak, L.A. and Nickerson, D.A.
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                                                                                                                                                                                                                                           /replace="a" 1131. .1331
/frequency="0.08"
/replace="c"
                                                        /gene="SEII"
                                                                                                                                                                 /replace="
1307. .182
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782. .1108
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625
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562. .839
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275. .402
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267
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249
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1. .274
                                        /product="SCDK4-binding protein p34SEI1"
1887
                                                                          /gene="SEI1"
join(1851. .
                                                                                                                            /rpt_family="MIR"
                                                                                                                                                  /note="Region not scanned
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1047
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257
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170
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/mol_type="genomic DNA"
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                                                                                                    /rpt_type=dispersed
[851. .5390
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/rpt_type=dispersed
4303 .5013
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/rpt_type=dispersed
3529. 3672
                                                                                                                                                                                                                                                                                                                                                         /product="SCDK4-binding protein
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/replace="c"
                                       /gene="SEI1"
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/frequency="0.44"
                                                                                                                                                                                                                                                        MDVLVGTQALERPPGPGR"
                                                                                                                                                                                                                                                                              ATGCLLDDGLEGLFEDIDTSMYDNELWAPASEGLKPGPEDGPGKEEAPELDEAELDYL
                                                                                                                                                                                                                                                                                                /translation="MLSKGLKRKREEEEEKEPLAVDSWWLDPGHAAVAQAPPAVASSS
LFDLSVLKLHHSLQQSEPDLRHLVLVVNTLRRIQASMAPAAALPPVPSSPPAAPSVADN
LLASSDAALSASMASLLEDLSHIEGLSQAPQPLADEGPPGRSIGGAAPSLGALDLLGP
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/codon_start=1
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/gene="SEI1"
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/replace="g"
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/replace="c"
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2610. .3252
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                                                                                                                                                                                    CACCAGGCCGTAGCATCGGGGGAGCAGCCCCAGCCTGGGTGCCTTGGACCTGCGCCCCTGGGCCCCAGCCTGGGCCCTTGGACCTGGGCCCCACCAGGCCGTAGCACCATCGGGGACCAGCCTGGGCCCAGCCTGGGCCCTGGGCCCACCAGGCCGACCAGGCCTGGGCCTGGGCCCAGCCTGGGCCTGGGCCCAGCCTGGGCCTGGGCC
                                                                                                                                                                                                                                                                       CAGCCACTGGCTGTCTACTGGACGATGGGCTTGAGGGCCTGTTTGAGGATATTGACACCT
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/rpt_type=dispersed
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/replace="c"
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AC010271
AC010271.8
                                                                                                                                Direct Submission
Submitted (13-JUL-2002) DOE Joint Genome Institute, 2800 M.
Drive, Walnut Creek, CA 94598, USA
On Jul 13, 2002 this sequence version replaced gi:15887272
Draft Sequence Produced by DOE Joint Genome Institute
                                                                                                                                                                                            Submitted (03-OCT 2001) DOE Joint Genome Insti
Drive, Walnut Creek, CA 94598, USA
5 (bases 1 to 160643)
DOE Joint Genome Institute and Stanford Human
                                                          www-shgc.stanford.edu
Quality: Phrap Quality >=40 100%
Estimated Total Number of Errors
Location/Qualifiers
                                                                                                                                                                                                                                                         Submitted (29-AUG-2000) DOE Joint Genome Insti
Drive, Walnut Creek, CA 94598, USA
4 (bases 1 to 160643)
DOE Joint Genome Institute and Stanford Human
                                                                                                                                                                                                                                                                                                                    Submitted (15-SEP-1999) Production Sequencing Facility, DOE Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 9459 (pases 1 to 160643)

DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                            Finishing Completed at Stanford Human Genome
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DOE Joint Genome Institute and Stanford Human Genome
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Homo sapiens chromosome
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 /organism="Homo sapiens"
/mol_type="genomic DNA"
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	Db 121 GAGCCGGACCTGCGGCACCTGGTGCTGAACACTCTGCGGCGCATCCAGGCGTCC 180	320 GAGCCGGACCTGCGGCACCTGGTGCTGGTCGTGAACACTCTGCGGCGCATCCAGGCGTCC	QY 260 GCCTCTAGCTCCCTCTTTGACCTCTCAGTGCTCAAGCTCCACCACAGCCTGCAGAGAGT 319	Db 1 GTCGACTCCTGGTGGCTAGATCCTGGCCACACAGGGGTGGCACAGGCACCCCGGCCGTG 60	25	Best Local Similarity 98.8%; Pred. No. 9e-153; Length 9/0; Best Local Similarity 98.8%; Pred. No. 9e-153; Matches 763; Conservative 0; Mismatches 7; Indels 2; Gaps 2;	+1)	/CLONG="NB6-5344S" /CLONG="NB6-5345S" /CLONG="NB6-5	/mol_type="genomic DNA" /db xref="taxon: 9606"	FEATURES Location/Qualifiers Source 1978 /Organism="Homo sapiens"	Karolinsk Sweden		REFERENCE 2 (bases 1 to 978) AITHORS 7.aharovsky F R	JOURNAL NUCLEIC ACIDS RES. 30 (14), 3163-3170 (2002) MEDLINE 22131767	of th	Levitsky, V.G., KOLCHAROV, N.A., PROEDPOOV, A.I., KASHNIDA Kisselev, L.L., Wasserman, W., Wahlestedt, C. and Zabarovs	AUTHORS Kutsenko, A.S., Gizatullin, R.Z., Al-Amin, A.N., Wang, F., Kvasha, S.M., Podowski, R.M., Matushkin, Y.G., Gyanchandani, A., Muravenko, O.V.,		NISM Homo sapiens (Human) Ribaryota - Mettagoa Chordata Craniata Vertebrata.		NB6-544S. ON AJ323696	LOCUS HSA323696 978 bp DNA linear PRI 18-JUL-2002 DEFINITION Homo sapiens genomic sequence surrounding NotI site, clone	RESULT 10 HSA323696	Db 781 G 781	Qy 806 G 806	Db 721 GGCAAGGAGGTCCGGAGCTGGACGAGGCCGAATTGGACTACCTCATGGATGTGCTG 780	QY 746 GGCAAGGAAGGACTCCGGACCTGGACGAGGCCGAATTGGACTACCTCATGGATGTGCTG 805	661 GACAATGAACTTTGGGCACCAGCCTCTGAGGGCCTCAAACCAGGCCCTGAGGATGGGCCG	OV 686 GACAATIGAACTTTTGGGCACCTCTCTGAGGCCTCTTGAGGCCACCCTTCTGAGGCCATGGGCGCCCCC 7/5	QY 626 GGCTGTCTACTGGACGATGGGCTTGAGGGCCTGTTGAGGATATTGACACCTCTATGTAT 685	

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Hsu.S.I., Yang.C.M., Sim,K.G.,
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Mammalia; E
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Mus musculus
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Hospital, 5 Lower Kent Ridge |
Location/Qualifiers
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Hsu, S.I. and Bonvo
Direct Submission
                                                                                                                                                                      bromodomain-interacting proteins activity of E2F-1/DP-1 EMBO J. 20 (9), 2273-2285 (2001)
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MDVLVGTQALERPPGPGR"
247 t
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. No. 5.6e-139;
ismatches 254;
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450 417 390 357 330 297 270 237 210 177 150

Query Match Best Local Best Local Matches 66 Qy 138 Db 237 Qy 198 Db 297	TITLE JOURNAL FEATURES SOUICE BASE COUNT ORIGIN	VERSION KEYWORDS SOURCE SOURCE ORGANISM REFERENCE AUTHORS	RESULT 12 AX537459 LOCUS DEFINITION ACCESSION		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
<pre>WMATCh 56.0%; Score 667.4; DB 6; Length 5869; Local Similarity 99.9%; Pred. No. 3.1e-137; nes 668; Conservative 0; Mismatches 1; Indels 0; Gaps 0; 138 AGATGCTGAGCAAGGGTCTGAAGCGGAAACGGGAGGAGGAGGAGGAAGGA</pre>	Ō		224 GAAATAAAAAAAAAA 1241 AX537459	104 CAGTAATGGTGTTTGGGCCAGGCTGGGGTTGAACTGGGATAATAG 119TTCTCTGATACGGGAAGAGACCCCAATCAGATTTTTCAAAT	811 GGAGTTGGACTACCTCATGGATGTACTAGTAGGCACACAGGCACTGGAAAGGCCACCAGG 870 838 GCCAGGGCGCTGAGCCCTCGTGCTGGAATGGTTGTCTGGTATCTGAACTGAGCCTGCT
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Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grinwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length	MGC. Mus musculus (house mouse) Mus musculus Mus musculus Mus musculus Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1165) 1 (bases 1 to 1165) Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Schaefer, C.F., Bhat, N.K., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheet, T. F. Argynstein, M. T. Indin, T. B. Toshiuri S.	798 ATGTGCTGG 806	678 CTATIGTATGACAATGAACTTTGGGCACCAGCCTCTGAGGGCCTCAAACCAGGCCCTGAGG 737		258 TGGCCTCTAGCTCCCTCTTTGACCTCCAGTGCTCAAGCTTCCACCACCAGCAGCAGAGA 317 357 TGGCCTCTAGCTCCCTCTTTGACCTCCTCAGTGCTCAAGCTTCCACCACCACCACCAGCAGA 416 318 GTGAGCCGGACCTGCGGCACCTGGTGGTGGTGGTGAACACTCTGCGGCGCATCCAGGCGT 377 417 GTGAGCCGGACCTGCGGCACCTGGTGCTGGTCGTGAACACTCTGCGGCGCATCCAGGCGT 476 378 CCATGGCACCCTGCGGCACCTGGTGCTGGTGCTAACACTCTGCGGCCCCAGTGTGG 437 417 CTGACCACCCGCGGCTGCCCTGCCACCTGGTGCCTAGCCCACCTGCAGCCCCAGTGTGG 437 417 CCATGGCACCCGCGGCTGCCCTGCCACCTGTGCCCACCCTGCAGCCCCAGTGTGG 437 418 CCATGGCAACCTTACTGGCAAGCTGGCACCTGTGCCCTACCCCACCTGCAGCCCCCAGTGTGG 536 438 CTGACAACTTACTGGCAAGCTGGCACCTGTGCCCTTTCAGCCCACCTGCCAGCCTCCTGG 497 411

	Db	Qy	Matches	Query Match	BASE COUNT ORIGIN						CDS		,	qene						FEATURES Source												COMMENT	REMARK		TITLE JOURNAL	REFERENCE AUTHORS	MEDLINE	TOTTONIA
	ACGGCAGCCGCTTCCTGATTGGCTGCGT	55 AGCCAACAAGCGATGCTGCCGCCGCCGCCGTTTCCTGATTGGTTGTGGGTTGGCTACCTCTTCG 114	0; Mismatc	53.8%; Score 640.8 Similarity 76.4%; Pred No. 2	262 a 332 c 341 g 230 t	ATGCLLDDGLEGLFEDIDTSMYDSELWLPASEGLKPGPENGPAKEEPPELDEAELDYL MDVLVGTOALERPPGPGR"	LFDLSVVKLHHSLRQSEPDLRHLVLVVNTLRRIQASMEPAPVLPPEPTQPPAPSVADS LLASSDAGLSASMASLLEDLNHIEDLNOAPOPOADRGPPGRSTGGTTSNTGALDITGE	/db_xrer="Locusid:55942" /translation="MLSKGLKRKREEEEETMEALSVDSCWLDPSHPAVAQTPPTVASSS	/protein_id="AAH160//.i" /db_xref="GI:16359222"	/product="p34SEI-1"	90. 1.800	/Worker Synonyms: Sell, TRLP-BIL" /db_xref="LocusID:55942" /db_xref="MgI:1913438"	/gene="1110032C13Rik"	/note="Vector: pcmv-sporm6"		<pre>/tissue_type="Mammary tumor. Metallothionien-TGF alpha model. 10 month old virgin mouse. Taken by biopsy."</pre>	/uL_xtet= caxu::10090" /clone="MGC:27573 IMAGE:4486318"	/strain="FVB/N"	/orc	Location/Qualifiers 11165	This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA qi: 9055331.	Series: IRAK Plate: 38 Row: c Column: 18	Clone distribution: MGC clone distribution information can be found	George Yang, Scott Zuyderduyn, Marco Marra.	orraine Spence	ט ע	Chiu, Chris Krzywinski,	Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,	5 (3	Library Arrayed by: The I.M.A.G.E. Conso Sequencing by: Genome Sequence Centre.	Tissue Procurement: Gilbert Smith, Ph.D. CDNA Library Preparation: Life Technologies, Inc.	Contact: MGC help desk Email: cgapbs-r@mail.nih.gov	ect URL: h	Pancer Genomics Office ve, Room 11A03, Betl	sion -OCT-2001) National Institutes of	2 (bases 1 to 1165) Strausberg,R.	12477932	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
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L Patent: JP 2002017375-A 167 22-JAN-2002;
L HELLIX RESEARCH INSTITUTE
OS Homo sapiens (human)
PN JP 2002017375-A/167
PD 22-JAN-2002
PF 07-JUL-2000 JP 2000253172
PF 07-JUL-2000 JP 2000253172
PF 07-JUL-2000 JP 2000253172
PF TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, S
PI ISHII,
PI YURI KAWAI, AI WAKAMATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI
SHINICHI KOJIMA,
PI TETSUJI OTSUKI, HISASHI KOGA
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Butherla; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 696)
1 (bases 1 to 696)
1 (bases 1, Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S., Kawai,Y., Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and Koga,H.
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JP 2002017375-A/167.
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                                               ACAGGCACCCCGGCCGTGGCCTCTAGCTCCCTCTTTGACCTCTCAGTGCTCAAGCTCCA 300
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TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
221 c 220 g 13
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JP 2002017375-A/2191
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Kroga.H.

Primer for synthesizing full-length cDNA and Patent: JP 2002017375-A 2191 22-JAN-2002;

HELIX RESEARCH INSTITUTE
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Ota,T., Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S.,
Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki
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SHINICHI KOJIMA,
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Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHI2UKO
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JP 2002017375-A/2191
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